LASERJET ENTERPRISE 500 MFP

Troubleshooting Manual

M525

HP LaserJet Enterprise 500 MFP M525 Printers

Troubleshooting Manual

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Conventions used in this guide

TIP: Tips provide helpful hints or shortcuts.

NOTE: Notes provide important information to explain a concept or to complete a task.

CAUTION: Cautions indicate procedures that you should follow to avoid losing data or damaging the product.

WARNING! Warnings alert you to specific procedures that you should follow to avoid personal injury, catastrophic loss of data, or extensive damage to the product.

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1 Theory of operation

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- Engine-control system
- Image-formation system
- Pickup, feed, and delivery system
- Tray 1 or Tray 2
- Additional tray
- Scanning/image capture system

Basic operation

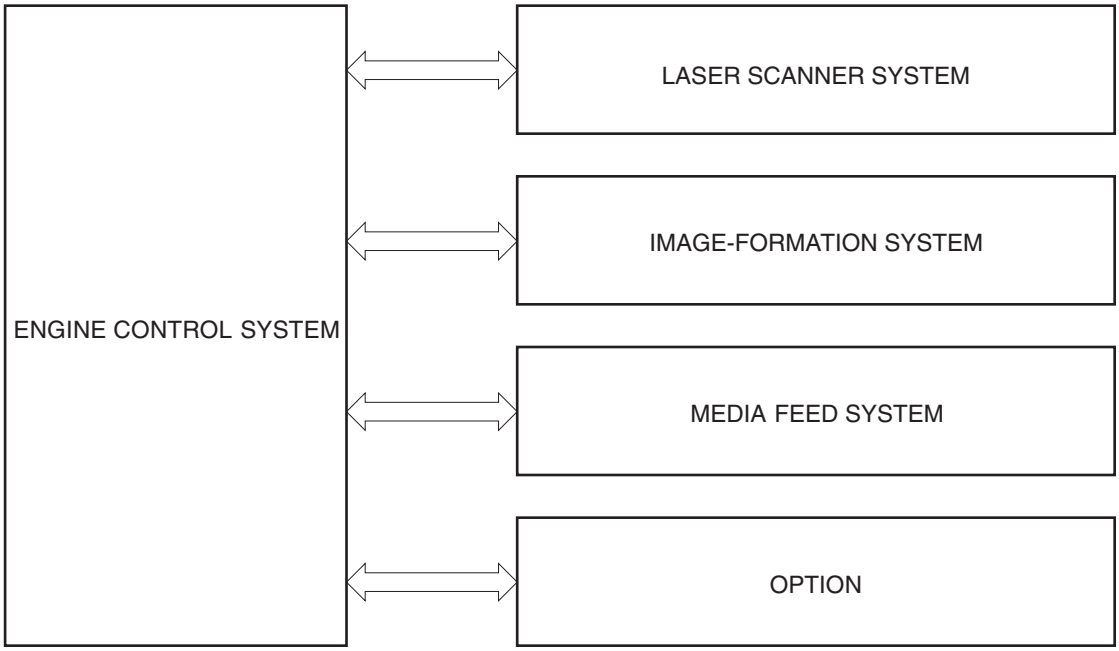
Major systems

The product contains the following systems:

- Engine-control system
- Laser/scanner system
- Image-formation system
- Media feed system
- Option

Product block diagram

Figure 1-1 Product block diagram



Sequence of operation

The DC controller in the engine-control system controls the operational sequences of the product. The following table describes durations and operations for each period of a print operation from when the product is turned on until the motor stops rotating.

Normal sequence of operation

Table 1-1 Sequence of operation

Name	Timing	Purpose
WAIT	From the time the power switch is turned on or the door is closed until the product is ready for a print operation.	Brings the product to printable condition. The product performs the following during the operation: • Detects the toner cartridge
STBY (standby)	From the end of the WAIT or LSTR period until either a print command is sent or the power switch is turned off.	Maintains the product in printable condition.
INTR (initial rotation)	From the time the print command is received until the temperature of the fuser unit reaches its targeted temperature.	Starts up the high-voltage biases, the laser/scanner, and the fuser unit for printing.
PRINT	From the end of the INTR period until the last sheet completes the fuser operation.	Forms the image on the photosensitive drum based on the VIDEO signals from the formatter. Transfers and fuses the toner image to the paper.
LSTR (last rotation)	From the end of the PRINT period until the main motor stops rotating.	Moves the last printed sheet out of the product. The product enters the INTR period as the LSTR period is completed, if the formatter sends another print command.

Formatter-control system

The formatter is responsible for the following procedures:

- Controlling sleep mode
- Receiving and processing print data from the various product interfaces
- Monitoring control-panel functions and relaying product-status information (through the control panel and the network or bidirectional interface)
- Developing and coordinating data placement and timing with the DC controller PCA
- Storing font information
- Communicating with the host computer through the network or the bidirectional interface

The formatter receives a print job from the network or bidirectional interface and separates it into image information and instructions that control the printing process. The DC controller PCA synchronizes the image-formation system with the paper-input and -output systems, and then signals the formatter to send the print-image data.

The formatter also provides the electrical interface and mounting locations for one EIO card and an additional DIMM.

Auto on/Auto off mode

This feature conserves power after the product has been idle for an adjustable period of time. When the product is in this mode, the control-panel backlight is turned off, but the product retains all settings, downloaded fonts, and macros. The setting is enabled by default. The product enters this mode after a 60-minute idle time or by touching the sleep button.

	Power consumption	Status of power button light	How to enable mode	How to disable mode (put in Ready state)	Relative time to Ready state	Control-panel term
Off	Less than 0.5W	Off	Manually: press the power button Automatically: sleep timer expires	Press the power button	Longest	

	Power consumption	Status of power button light	How to enable mode	How to disable mode (put in Ready state)	Relative time to Ready state	Control-panel term
Auto off	Less than 1W	Blinks at 3 second intervals	Sleep timer expires	Printing or network maintenance tasks Insert or remove paper from the ADF Open or close the scanner Open the cartridge door Touch the control panel touchscreen Press the power button	Longer than Sleep mode	Network port
Sleep (A1W)	Approximately 6W	Blinks at 3 second intervals	Sleep timer expires	Printing or network maintenance tasks Insert or remove paper from the ADF Open or close the scanner Open the cartridge door Touch the control panel touchscreen Press the power button	Shortest	All events

NOTE: Product error messages override the Sleep message. The product enters sleep mode at the appropriate time, but the error message continues to appear.

Input/output

The product receives print data primarily from the embedded HP Jetdirect print server. The product also has a USB 2.0 port for connecting directly to a computer.

CPU

The formatter incorporates a 800 MHz processor.

Memory

The random access memory (RAM) on the formatter PCA contains the page, I/O buffers, and the font storage area. It stores printing and font information received from the host system, and can also serve to temporarily store a full page of print-image data before the data is sent to the print engine.

NOTE: If the product encounters a problem when managing available memory, a clearable warning message displays on the control-panel display.

Firmware

The firmware is contained on the hard disk drive (HDD) (M525f model only) or solid state module (SSM) (M525dn model only). A remote firmware upgrade process is available, which overwrites the firmware.

Nonvolatile memory

The product uses nonvolatile memory (NVRAM) to store device and user configuration settings. The contents of NVRAM are retained when the product is turned off or disconnected.

PJL overview

The printer job language (PJL) is an integral part of configuration, in addition to the standard printer command language (PCL). With standard cabling, the product can use PJL to perform a variety of functions such as these:

- Two-way communication. The product communicates with the host computer through a network connection or a USB connection. The product can inform the host about such things as the control-panel settings, and the control-panel settings can be changed from the host.
- Dynamic I/O switching. The product uses this switching to be configured with a host on each I/O. The product can receive data from more than one I/O simultaneously, until the I/O buffer is full. This can occur even when the product is offline.
- Context-sensitive switching. The product can automatically recognize the personality (PS or PCL) of each job and configure itself to serve that personality.
- Isolation of print environment settings from one print job to the next. For example, if a print job is sent to the product in landscape mode, the subsequent print jobs print in landscape mode only if they are formatted for landscape printing.

PML

The printer management language (PML) allows remote configuration and status read-back through the I/O ports.

Control panel

The formatter sends and receives product status and command data to and from the control-panel PCA.

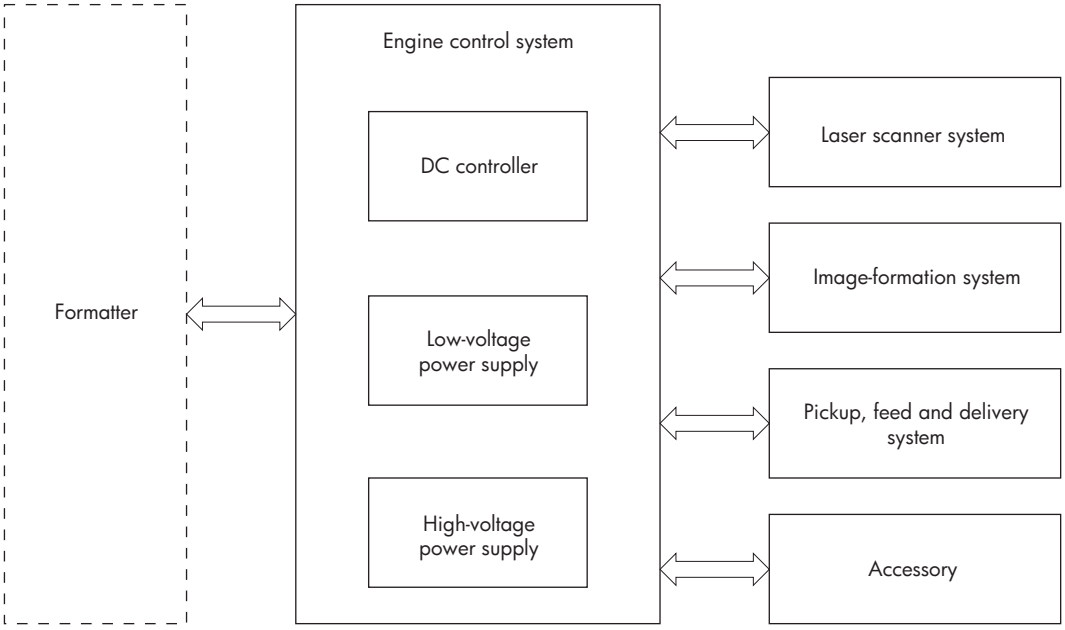
Engine-control system

The engine-control system coordinates all product functions, according to commands that the formatter sends. The engine-control system drives the system, the image formation system, and the pickup/feed/delivery system.

The engine control system contains the following major components:

- DC controller
- Low-voltage power supply
- High-voltage power supply

Figure 1-2 Engine-control system



Motors, fans, clutches, solenoids, switches, and sensors

Figure 1-3 Motors

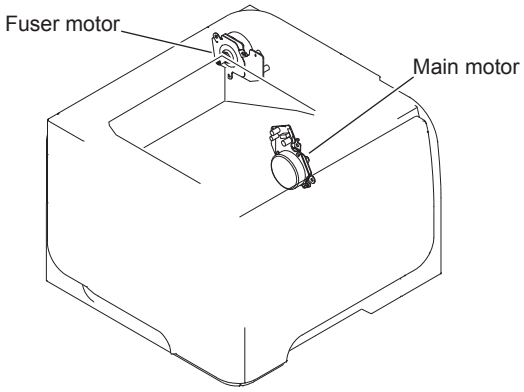


Table 1-2 Motors

Description	Components driven	Fault detection
Main motor (M8001)	• Pickup roller • Feed roller • Transfer roller • Photosensitive drum • Developing roller • Duplex repickup roller	Yes
Fuser motor (M8002)	• Pressure roller • Delivery roller • Fuser-delivery roller • Duplex-feed roller	Yes

Figure 1-4 Fans

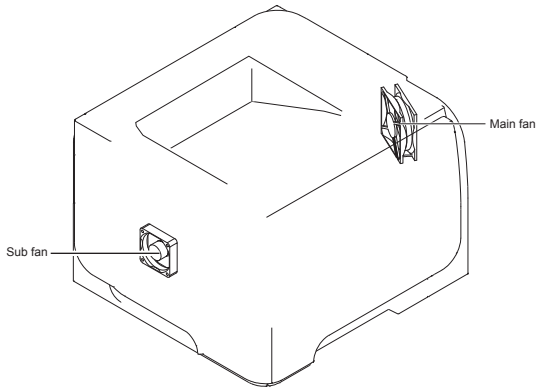


Table 1-3 Fans

Description	Area cooled	Type	Speed
Main fan (FM1)	Inside the product	Intake	Full
Sub fan (FM2)	Inside the product	Intake	Full

Figure 1-5 Solenoids and clutches (product)

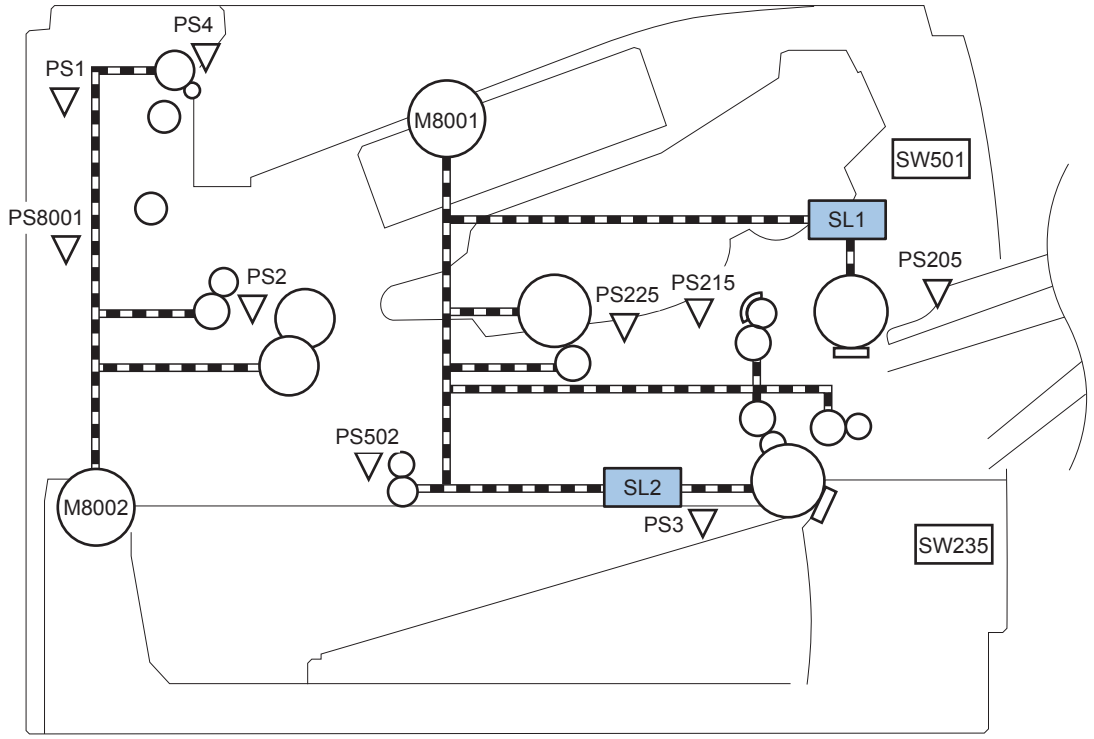


Table 1-4 Solenoids and clutches (product)

Item	Description
SL1	Tray 1 (multipurpose tray) pickup solenoid
SL2	Cassette (Tray 2) pickup solenoid

Figure 1-6 Solenoids and clutches (Tray 3 and Tray 4)

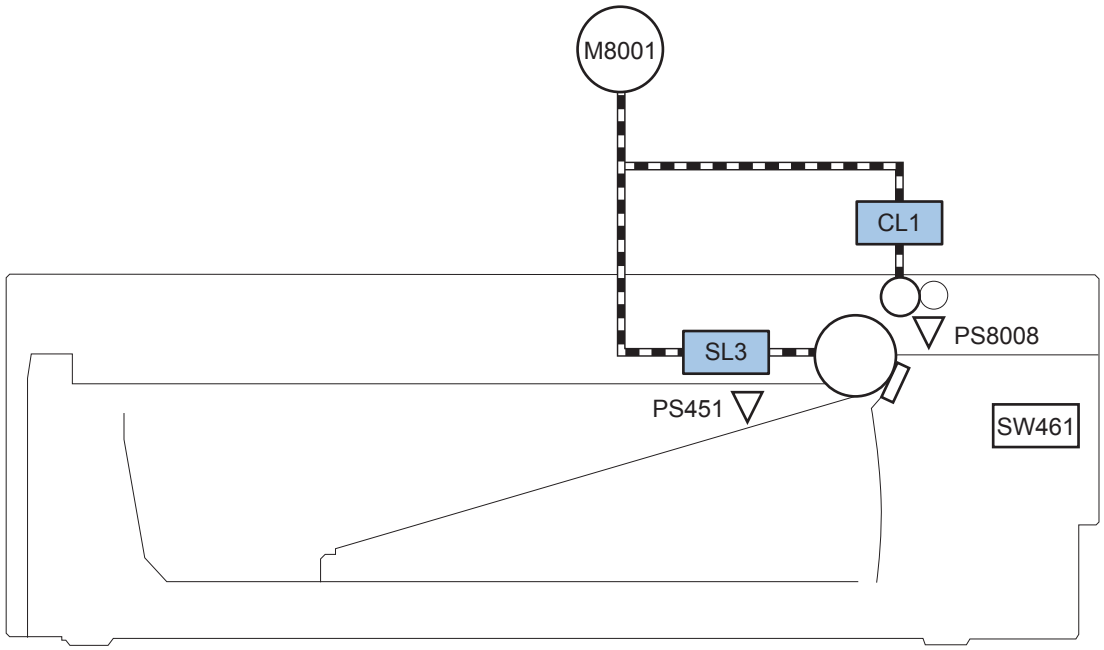


Table 1-5 Solenoids and clutches (Tray 3 and Tray 4)

Item	Description
SL3	Paper feeder pickup solenoid
CL1	Paper feeder pickup clutch

NOTE: Tray 3 and Tray 4 are identical 500-sheet input trays.

Figure 1-7 Switches (product)

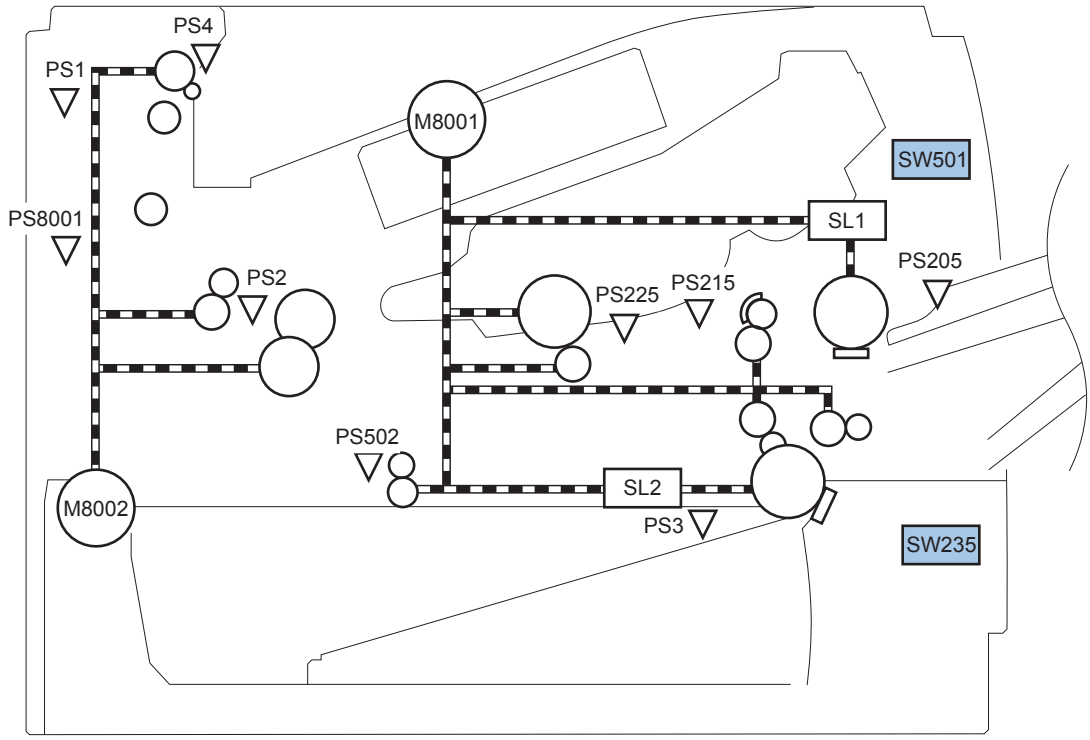


Table 1-6 Switches (product)

Item	Description
SW235	Cassette presence switch
SW501	Cartridge-door switch

Figure 1-8 Switches (Tray 3 and Tray 4)

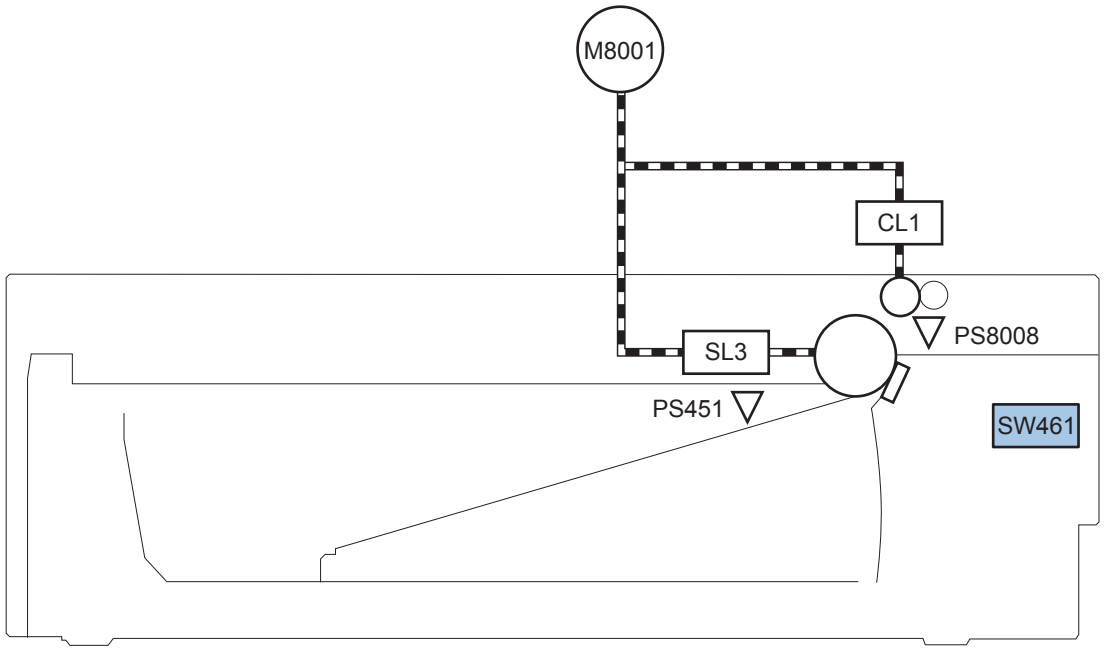


Table 1-7 Switches (Tray 3 and Tray 4)

Item	Description
SW461	Paper feeder cassette presence switch

NOTE: Tray 3 and Tray 4 are identical 500-sheet input trays.

Figure 1-9 Sensors

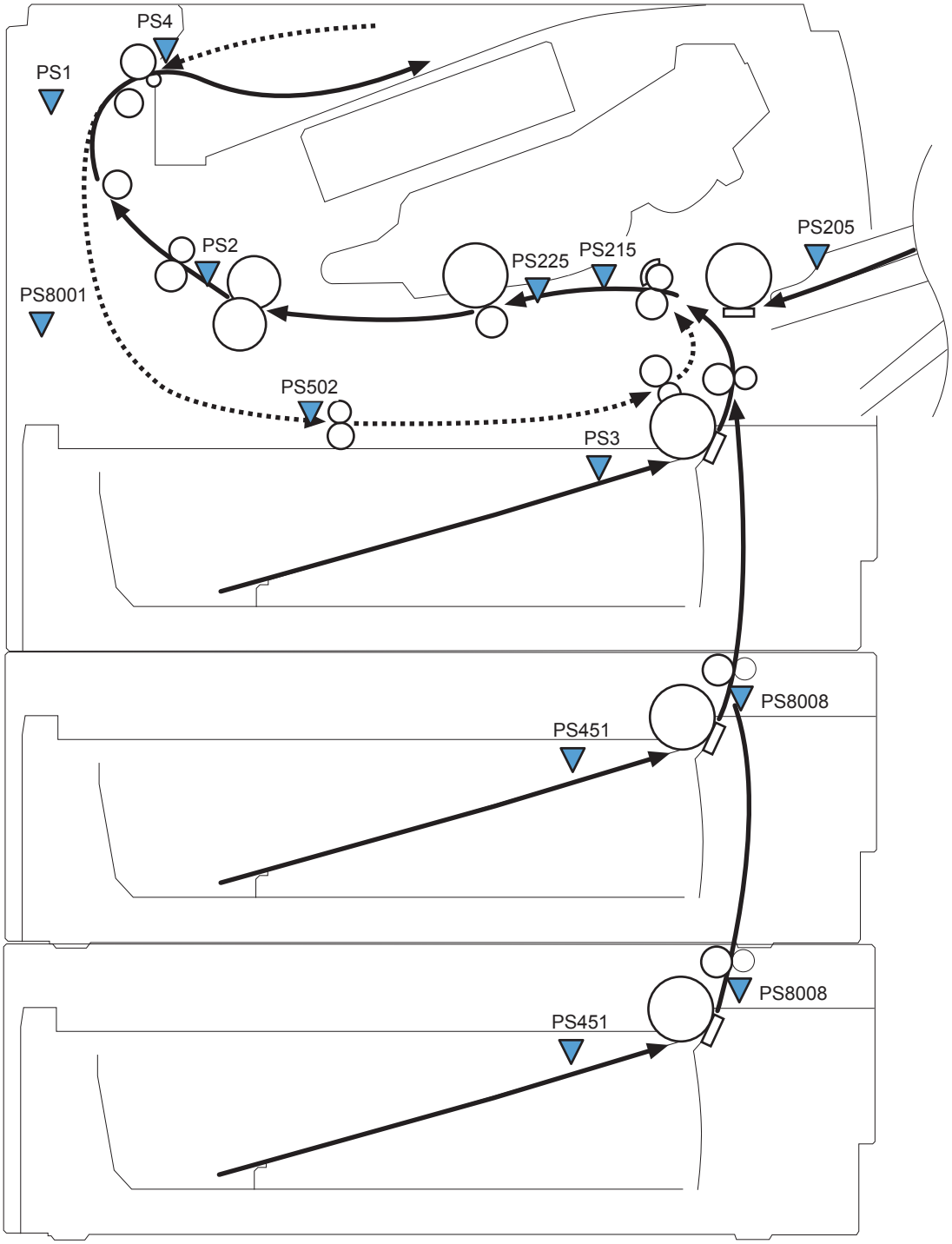


Table 1-8 Sensors

Item	Description	Item	Description
PS1	Face-up sensor	PS225	Media width sensor
PS2	Fuser delivery sensor	PS502	Duplex media-feed sensor

Table 1-8 Sensors (continued)

Item	Description	Item	Description
PS3	Cassette media-presence sensor	PS451	Paper feeder cassette media-presence sensor **NOTE:** PS451 is used in Tray 3, and Tray 4.
PS4	Face-down tray media-full sensor	PS8001	Rear door sensor
PS205	Tray 1 (multipurpose tray) media-presence sensor	PS8008	Paper feeder media-feed sensor **NOTE:** PS8008 is used in Tray 3, and Tray 4.
PS215	Top-of-Page (TOP) sensor		

DC controller operations

The DC controller controls the operational sequences of the product systems.

Figure 1-10 DC controller block diagram

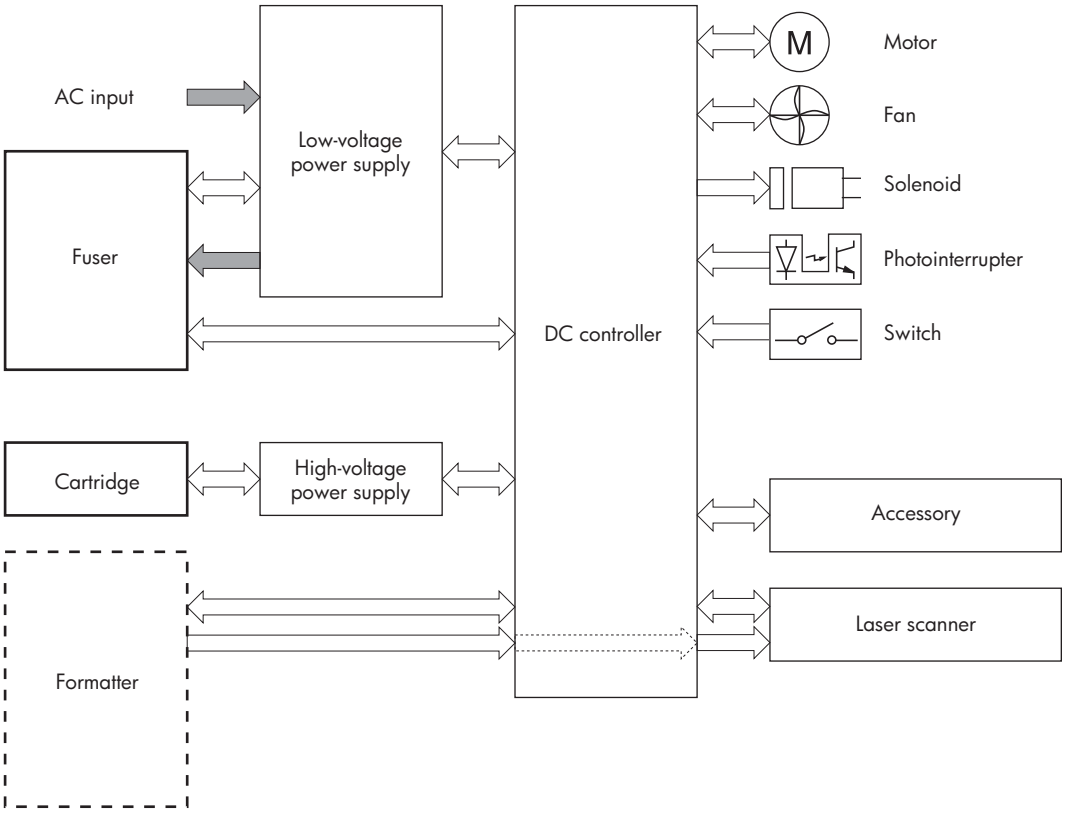


Table 1-9 DC controller controlled components

Component	Designator	Description
Motor	M8001	Main motor
	M8002	Fuser motor
Fan	FM1	Main fan
	FM2	Sub fan
Solenoid	SL1	Tray 1 (multipurpose tray) pickup solenoid
	SL2	Cassette (Tray 2) pickup solenoid
Photointerrupter	PS1	Face-up sensor
	PS2	Fuser delivery sensor
	PS3	Cassette media presence sensor
	PS4	Face-down tray (output bin) media-full sensor
	PS205	Tray 1 (multipurpose tray) presence sensor
	PS215	Top-Of-Page (TOP) sensor

Table 1-9 DC controller controlled components (continued)

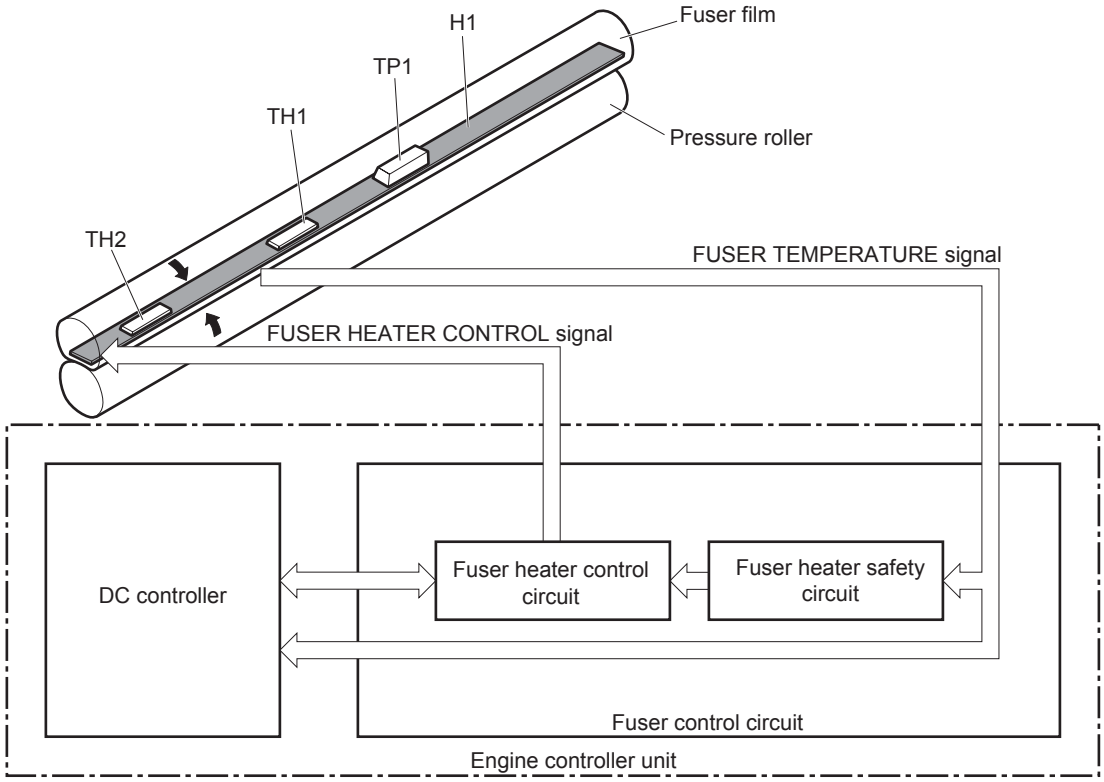
Component	Designator	Description
	PS225	Media width sensor
	PS502	Duplex media-feed sensor
	PS8001	Rear door sensor
Switch	SW235	Cassette-presence switch **NOTE:** PS8008 is used in Tray 3, and Tray 4
	SW240	Power switch
	SW260	Interlock switch
	SW501	Cartridge-door switch
	SW2100	Test print switch

Fuser-control circuit

The fuser-control circuit monitors and controls the temperature in the fuser. The product uses on-demand fusing. The fuser-control circuit consists of the following major components:

- Fuser heater (H1): heats the fusing film
- Thermistor (TH1 and TH2): detects the fuser temperature (contact type)
  - Main thermistor (TH1): controls the temperature in the fuser (contact type)
  - Sub thermistor (TH2): detects a one-sided temperature rise in the fuser and controls the temperature in the fuser (contact type)
- Thermoswitch (TP1): prevents abnormal temperature rise in the fuser (contact type)

Figure 1-11 Fuser control circuit



Fuser failure detection

The DC controller determines a fuser unit failure, deactivates the FUSER HEATER CONTROL signal, releases the relay to interrupt power supply to the fuser heater and notifies the formatter of a failure state when it encounters the following conditions:

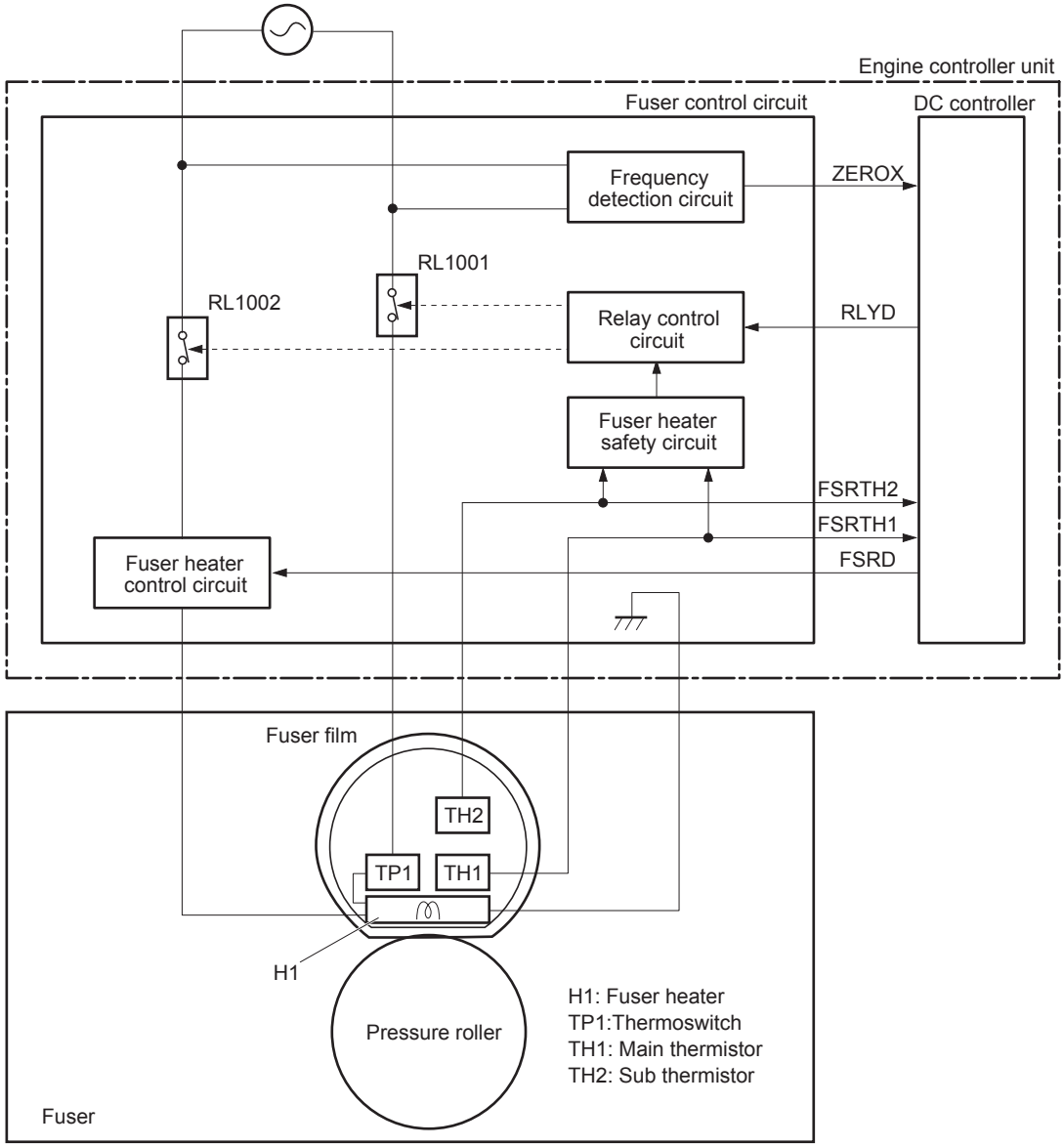
- Start-up failure
  - If the main thermistor does not detect a specified temperature during the start-up process of the heater in the wait period
  - If the main thermistor does not detect a specified temperature during the heater temperature control in the initial rotation period
- Abnormal low temperature
  - If the main thermistor detects an abnormal low temperature of the fuser unit during the printing operation
  - If the sub thermistor detects an abnormal low temperature of the fuser unit during the printing operation
- Abnormal high temperature
  - If the main thermistor detects an abnormal high temperature of the fuser unit
  - If the sub thermistor detects an abnormal high temperature of the fuser unit
- Frequency-detection circuit failure
  - If a specified frequency of the ZERO CROSSING signal is not detected within a specified period after the product is turned on

Fuser temperature control

The fuser temperature control maintains the temperature of the fuser heater at its targeted temperature.

The DC controller monitors the FUSER TEMPERATURE (FSRTH1, FSRTH2) signals and sends the FUSER HEATER CONTROL (FSRD) signal according to the detected temperature. The fuser heater control circuit controls the fuser heater depending on the signal so that the heater remains at the targeted temperature.

Figure 1-12 Fuser-heater control circuit



Fuser protective function

The protective function detects an abnormal temperature rise of the fuser unit and interrupts power supply to the fuser heater.

The following three protective components prevent an abnormal temperature rise of the fuser heater:

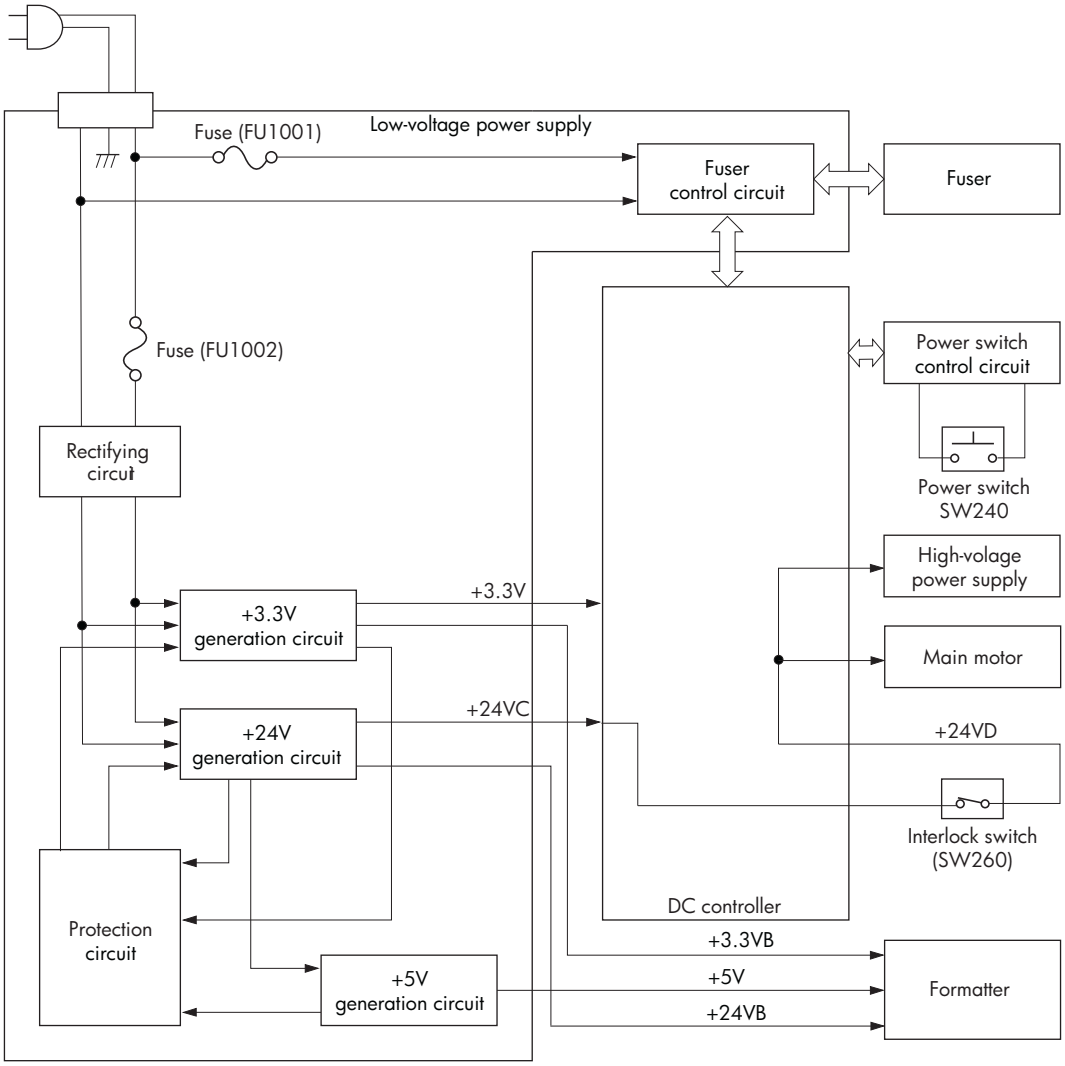
- DC controller
  - The DC controller interrupts power supply to the fuser heater when it detects an abnormal temperature of the fuser heater.
- Fuser heater safety circuit
  - The fuser heater safety circuit interrupts power supply to the fuser heater when the detected temperature of the main and sub thermistors is abnormal.
- Thermoswitch
  - The contact of the thermoswitch is broken to interrupt power supply to the fuser heater when the thermoswitch detects an abnormal temperature of the fuser heater.

Low-voltage power supply

The low-voltage power supply (LVPS) converts ac input voltage to dc voltage. The LVPS has two fuses on the PCA. The LVPS 24 V output is interrupted to the fuser and the high-voltage power supply if the cartridge-door interlock switch (SW501) is in the off position (cover open).

⚠ **WARNING!** The product power switch only interrupts dc voltage from the LVPS. The ac voltage is present in the product when the power cable is plugged into a power receptacle and the power switch is in the off position. You must disconnect the product power cable before servicing the product.

Figure 1-13 Low-voltage power supply (LVPS)



Overcurrent/overvoltage protection

The low-voltage power supply has a protective function against overcurrent and overvoltage to prevent failures in the power supply circuit. If an overcurrent or overvoltage condition occurs, the system automatically cuts off the output voltage.

If the DC power is not being supplied from the low-voltage power supply, the protective function might be running. In such case, turn off the power switch and disconnect the power cable. Do not connect the power cable or turn on the power switch again until the cause is found.

WARNING! If you believe the overcurrent or overvoltage protection circuits have been activated, do not connect the product power cable or turn on the product power until the cause of the failure is found and corrected.

In addition, two fuses in the low-voltage power supply protect against overcurrent. If overcurrent flows into the AC line, the fuses melt and cut off the power distribution.

For safety reasons, the product interrupts power (24 V) to the main motor and high voltage power supply. The interloct switch is turned off to interrupt power when the cartidge door opens (SW260 is turned off). The AC voltage remains present in the product when the power switch is in the off position. Disconnect the power cable when disassembling the product.

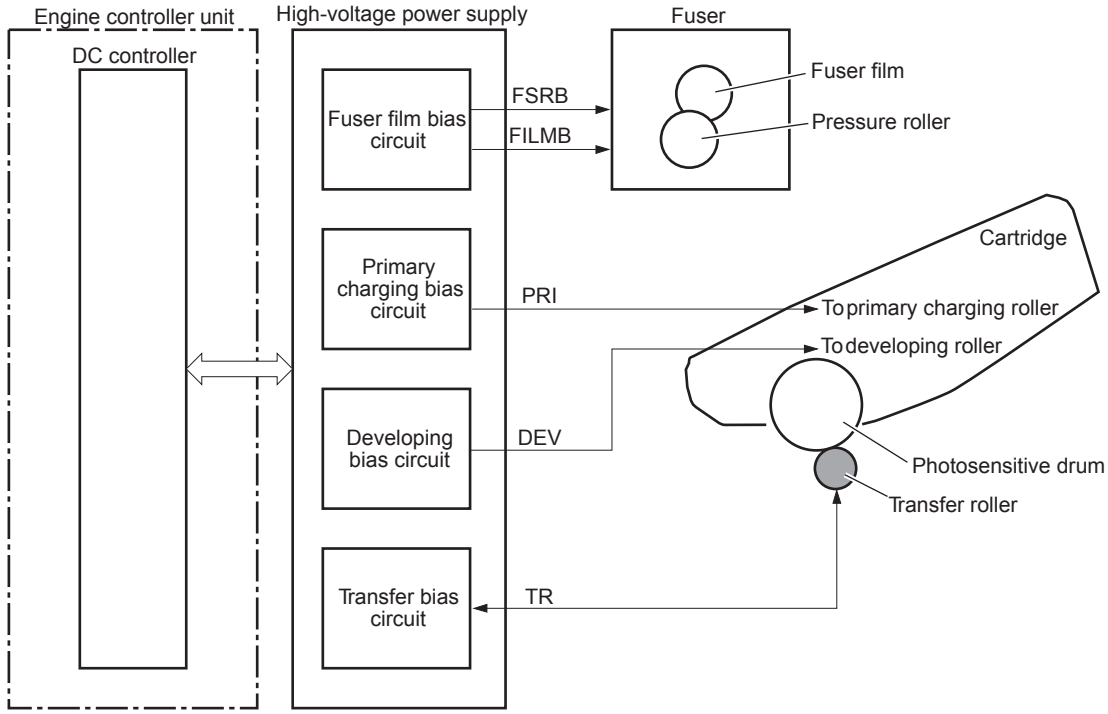
NOTE: An accidental electrical short while servicing the product can result in a loss of power to the product causing the control panel to shut down (blank out). Turn the product power off, and then unplug the power cord. Wait at least 15 minutes before plugging the power cord in and turning the product power on.

High-voltage power supply

The high-voltage power supply (HVPS) applies biases to the following components:

- Primary charging roller
- Developing roller
- Transfer roller
- Fusing film

Figure 1-14 High-voltage power supply



Formatter

Formatter heartbeat LED

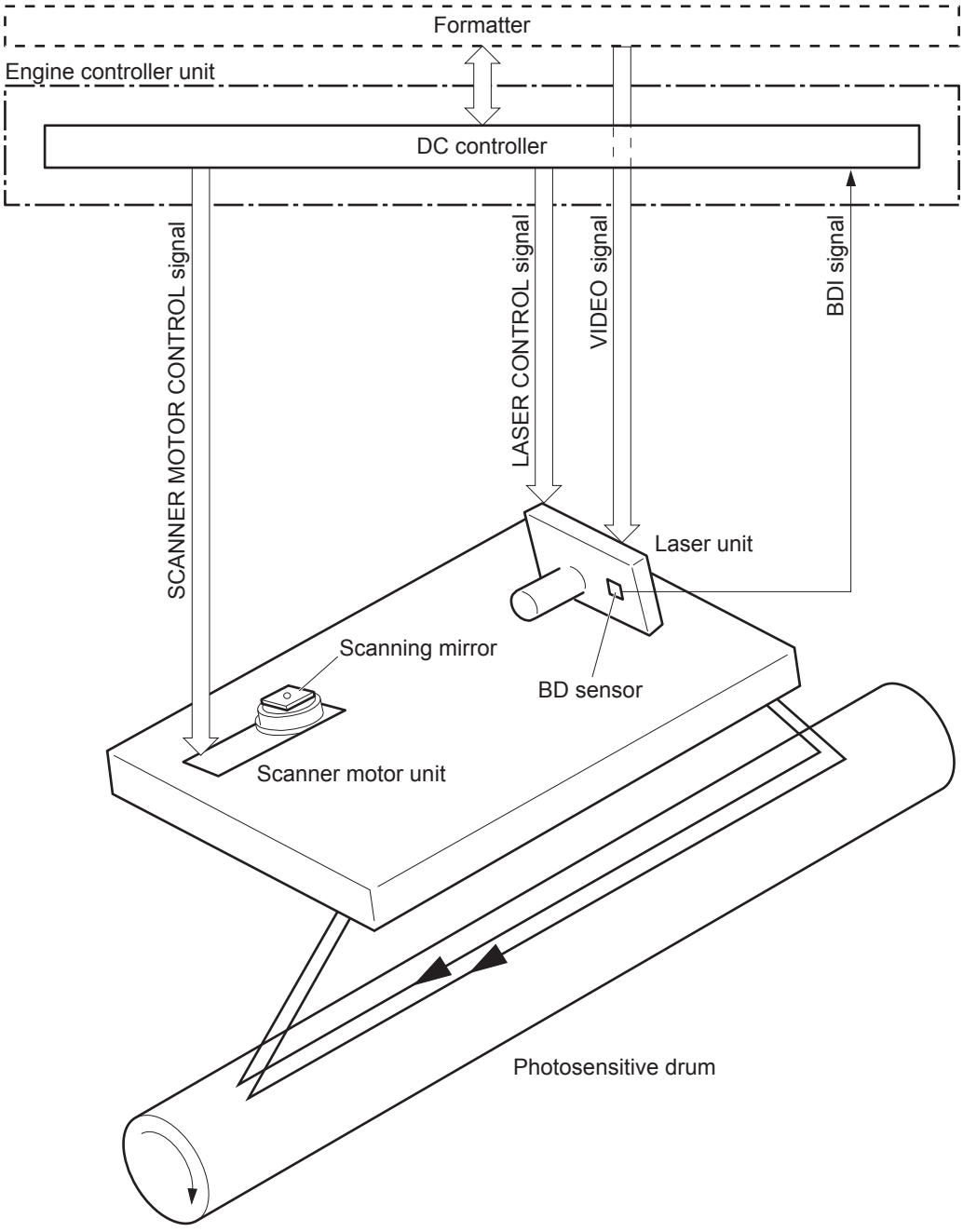
The heartbeat LED indicates that the formatter is functioning correctly. While the product is initializing after you turn the product on, the LED blinks rapidly, and then turns off. When the product has finished the initialization sequence, the heartbeat LED pulses on and off.

Laser/scanner system

The laser/scanner system receives VIDEO signals from the DCC and the formatter and converts the signals into latent images on the photosensitive drum.

The main components of the laser/scanner are the laser unit and the scanner motor unit. The DC controller sends signals to the laser/scanner to control the functions of these components.

Figure 1-15 Laser/scanner system



Laser failure detection

The DC controller determines an optical unit failure and notifies the formatter, if the laser/scanner encounters the following conditions:

- The scanner motor does not reach a specified rotation within a specified period of the scanner motor start up.
- The rotation of the scanner motor is out of specified range for a specified period during the scanner motor drive.
- The BD interval is out of a specified value during a print operation.

Image-formation system

Electrophotographic process

The electrophotographic process forms an image on the paper. Following are the major components used in the process:

- Toner cartridge
- Transfer roller
- Fuser
- Laser/scanner

The DC controller uses the laser/scanner and HVPS to form the toner image on the photosensitive drum. The image is transferred to the paper and then fused.

Figure 1-16 Electrophotographic process block diagram

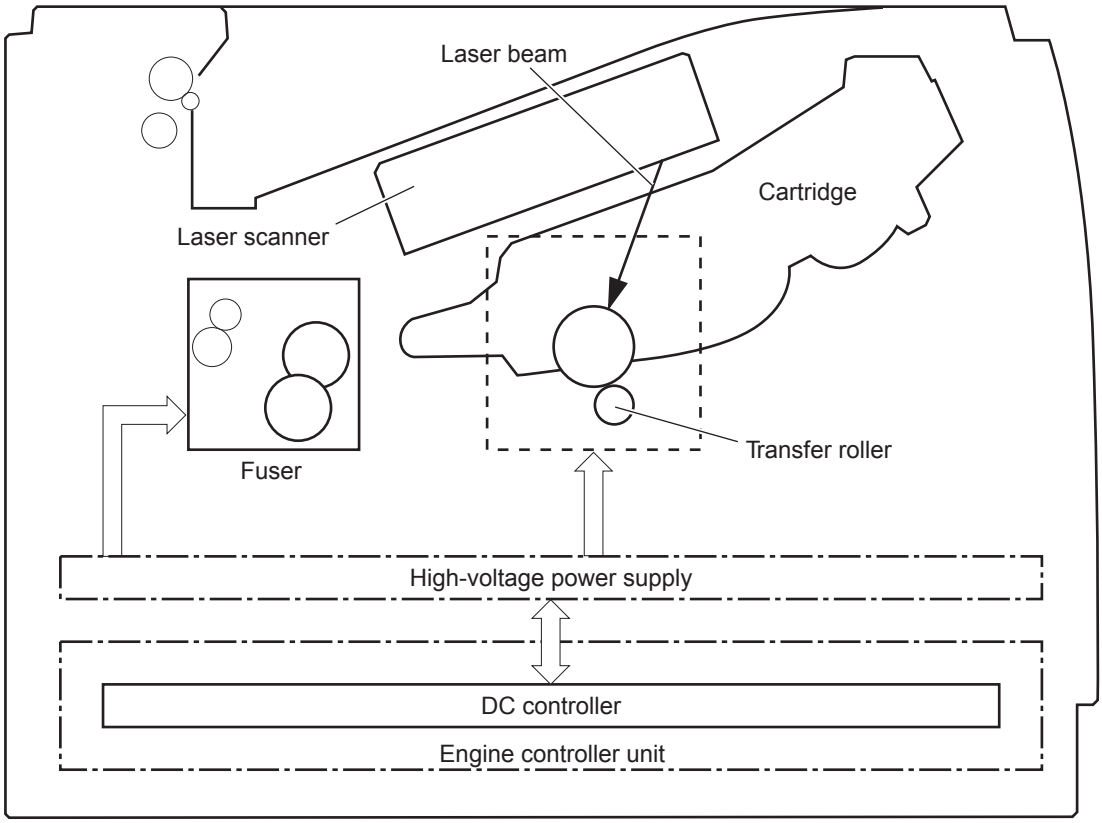
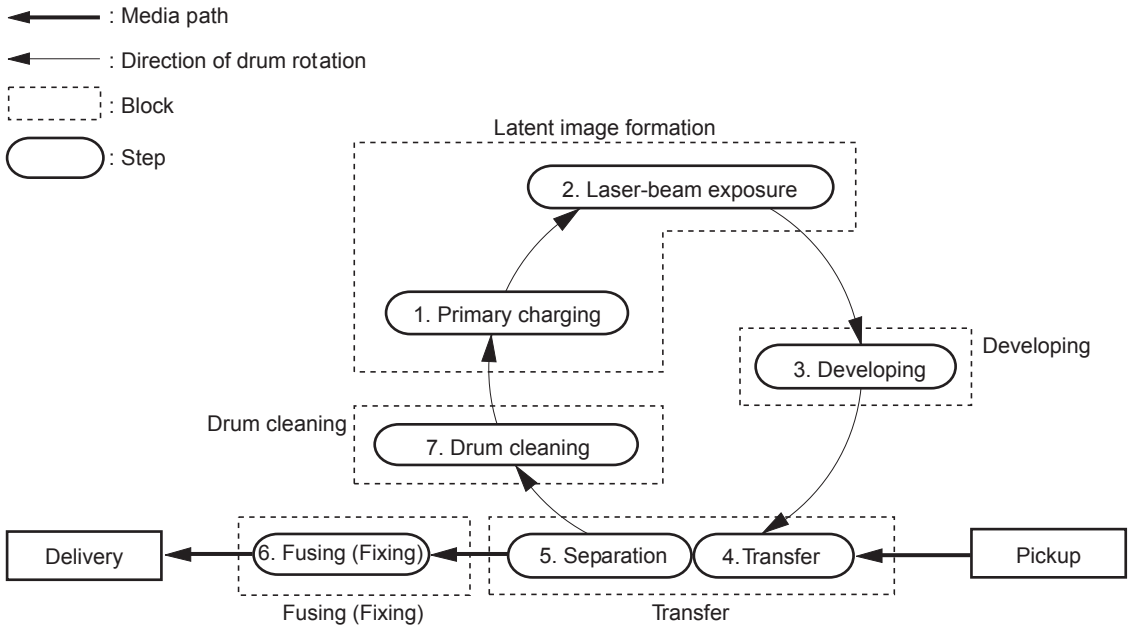


Image formation process

Each of the following process function independently and must be coordinated with the other product processes. Image formation consists of the following processes:

- Latent-image formation block
  - Step 1: Primary charging
  - Step 2: Laser-beam exposure
- Developing block
  - Step 3: Developing
- Transfer block
  - Step 4: Transfer
  - Step 5: separation
- Fusing block
  - Step 6: Fusing
- Drum cleaning block
  - Step 7: Drum cleaning

Figure 1-17 Image formation process



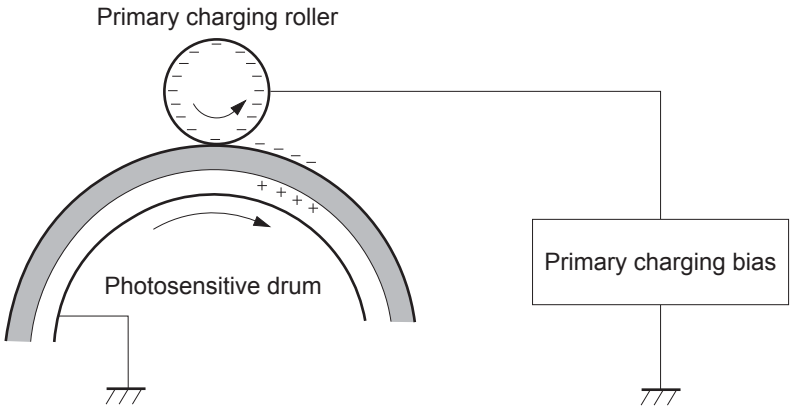
Latent-image formation stage

During the latent-image formation stage, the laser/scanner forms an invisible image on the photosensitive drum in the toner cartridge.

Primary charging

Step 1: DC and AC biases are applied to the primary charging roller, which transfers a uniform negative potential to the photosensitive drum.

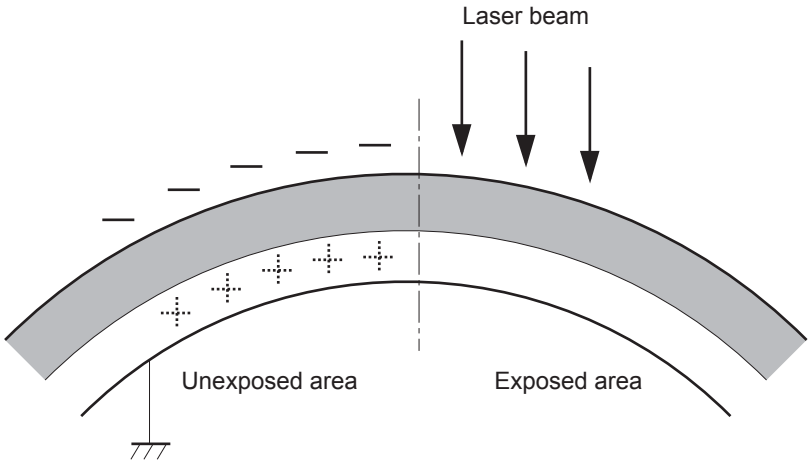
Figure 1-18 Primary charging



Laser beam exposure

Step 2: The laser beam scans the photosensitive drum to neutralize negative charges on parts of the drum surface. An electrostatic latent image is formed on the drum where negative charges were neutralized.

Figure 1-19 Laser beam exposure

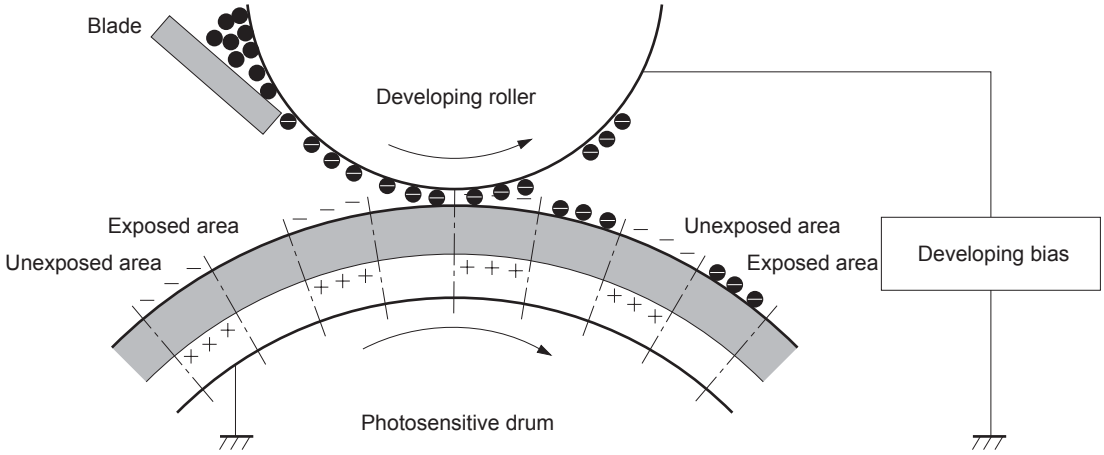


Developing stage

Toner cartridge

Step 3: In the toner cartridge, the developing cylinder comes in contact with the photosensitive drum to deposit toner onto the electrostatic latent image.

Figure 1-20 Toner cartridge

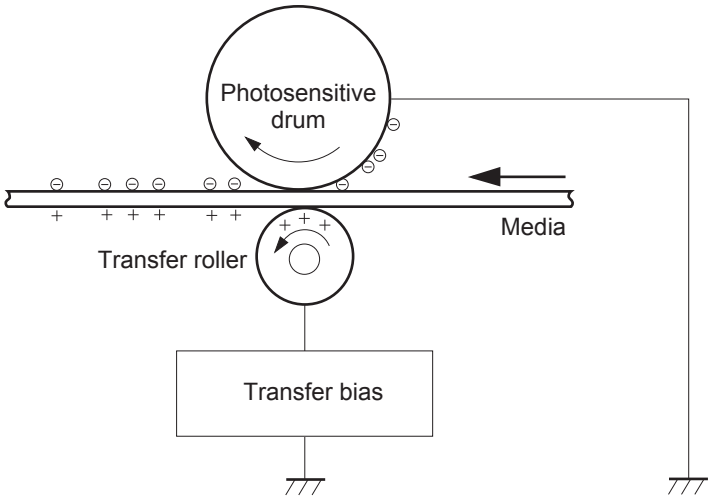


Toner acquires a negative charge from the friction that occurs when the developing roller rotates against the developing blade. The developing bias is applied to the developing roller to make a potential difference between the developing roller and the photosensitive drum. The negatively charged toner is attracted to the latent image on the photosensitive drum because the drum surface has a higher potential.

Transfer stage

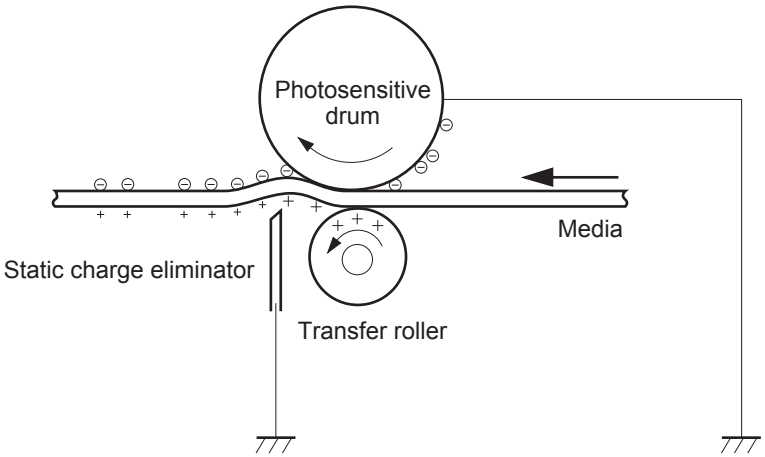
Step 4: The transfer charging roller, to which a DC positive bias is applied, imparts a positive charge on the print media. When the print media comes in contact with the photosensitive drum, the toner is transferred to the print media.

Figure 1-21 Transfer



Step 5: The elasticity of the print media causes its separation from the photosensitive drum. A static charge eliminator aids separation by weakening any electrostatic adhesion.

Figure 1-22 Separation

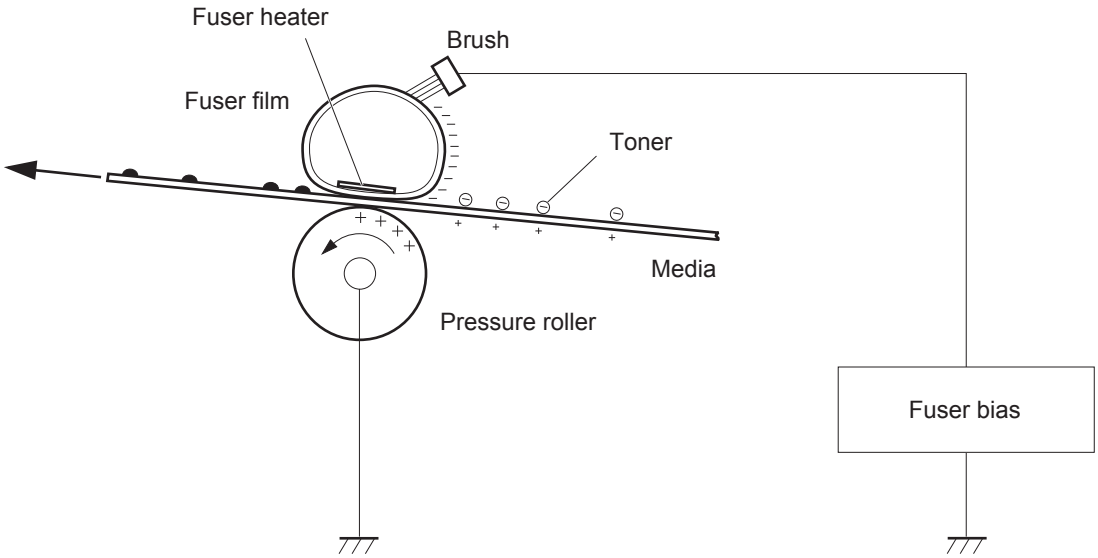


Fusing stage

Step 6: The DC negative bias applied to the fusing film strengthens the holding force of the toner on the print media and prevents the toner from scattering.

The product uses an on-demand fuser method. The toner image is permanently affixed to the paper with heat and pressure.

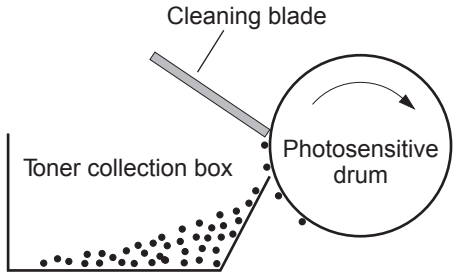
Figure 1-23 Fusing



Cleaning stage

Step 7: The cleaning blade scrapes the residual toner off of the photosensitive drum and deposits it into the waste toner case.

Figure 1-24 Drum cleaning



Toner detection

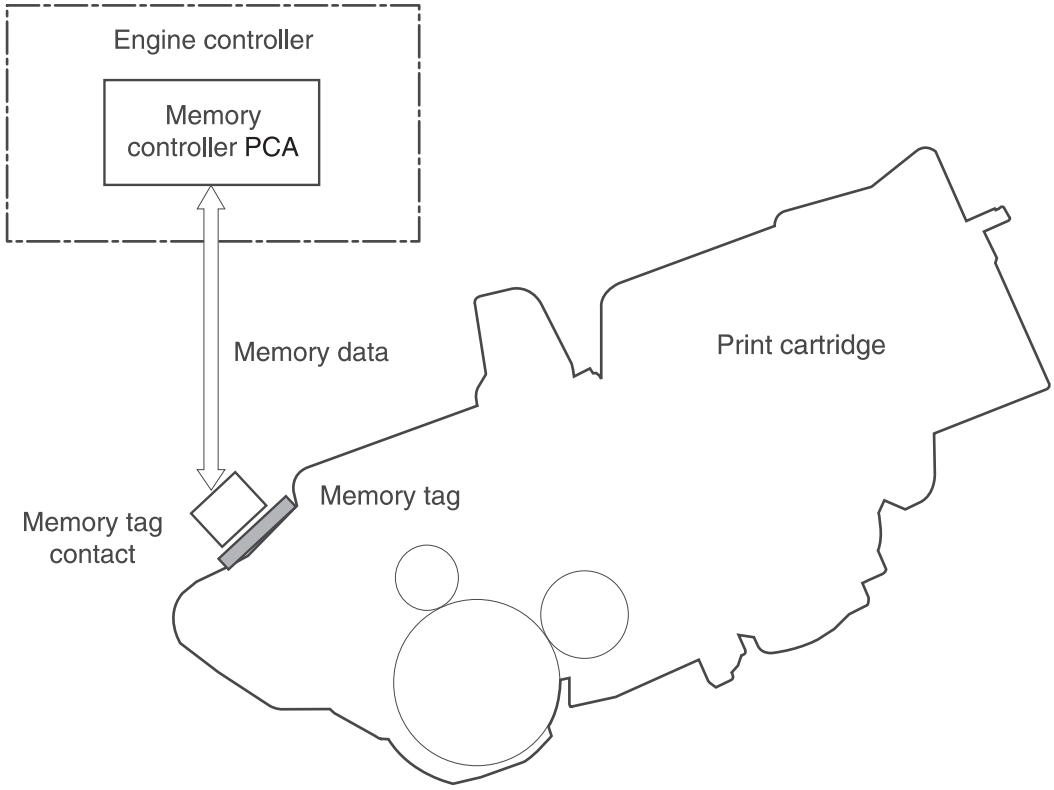
The product uses a nonvolatile memory tag built into the toner cartridge. Print-cartridge detection happens when the engine controller detects the presence of a genuine HP print-cartridge that contains a memory tag. Toner detection happens as the engine controller reads or writes the data that is stored on the memory tag. The engine controller renews the information in the prescribed timing and reads or writes it from or to the memory tag.

The engine controller commands the memory tag to read or write with the following conditions:

- **Read**
  - Power is on
  - The cartridge door is closed
  - A command is received from the formatter
- **Write**
  - A page of paper is printed
  - A command is received from the formatter

When the engine controller fails to read or write three times in a row, it determines that the memory tag is abnormal and sends a cartridge memory abnormality warning to the formatter.

Figure 1-25 Toner cartridge memory tag



Pickup, feed, and delivery system

The pickup/feed/delivery system consists of several types of feed rollers and sensors. The product uses a motor and two solenoids to drive the rollers. Three media-detection sensors detect paper as it passes through the product. If media does not reach or pass each sensor within a specified time, the DCC determines that a jam has occurred and alerts the formatter.

Paper trays

The product has the following paper trays:

- Tray 1 (multipurpose tray; all models)
- Tray 2 (500-sheet tray; all models)
- Tray 3 (optional 500-sheet input tray)
- Tray 4 (optional 500-sheet input tray)

Photo sensors and switches

Figure 1-26 Photo sensors and switches (product)

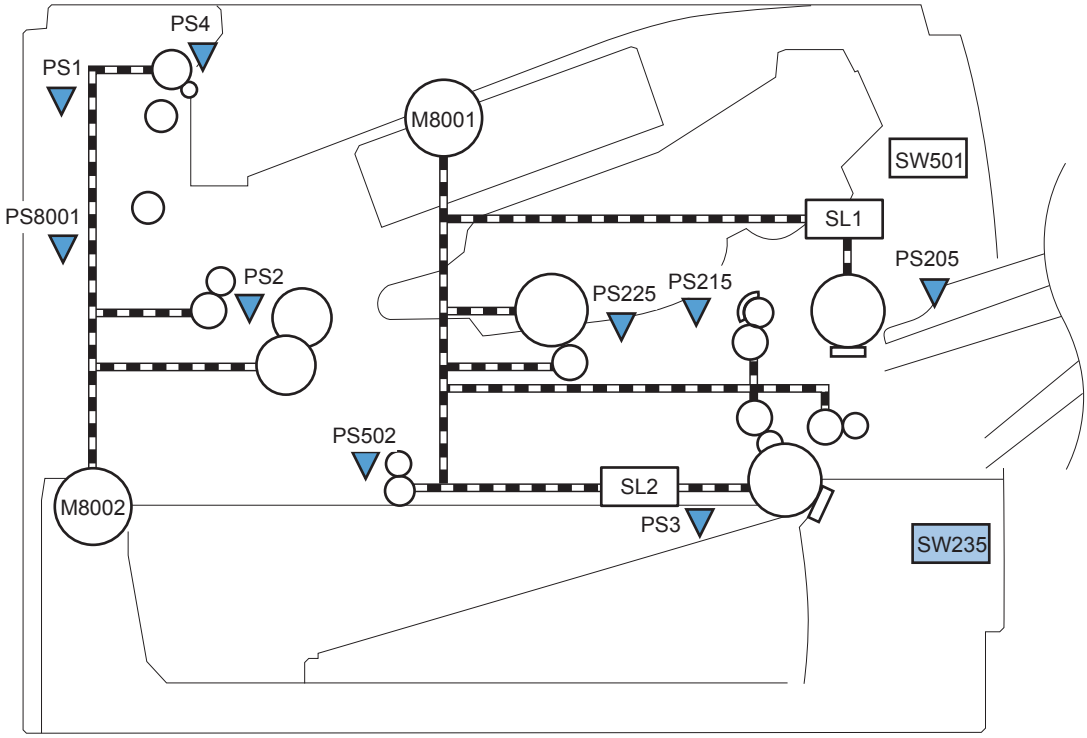


Table 1-10 Photo sensors and switches (product)

Item	Description	Item	Description
PS1	Face-up sensor	PS215	Top-of-Page (TOP) sensor
PS2	Fuser delivery sensor	PS225	Media width sensor
PS3	Cassette media-presence sensor	PS502	Duplex media-feed sensor
PS4	Face-down tray media-full sensor	PS8001	Rear door sensor
PS205	Tray 1 (MP tray) media-presence sensor	SW235	Cassette presence sensor

Figure 1-27 Photo sensors and switches (Tray 3 and Tray 4)

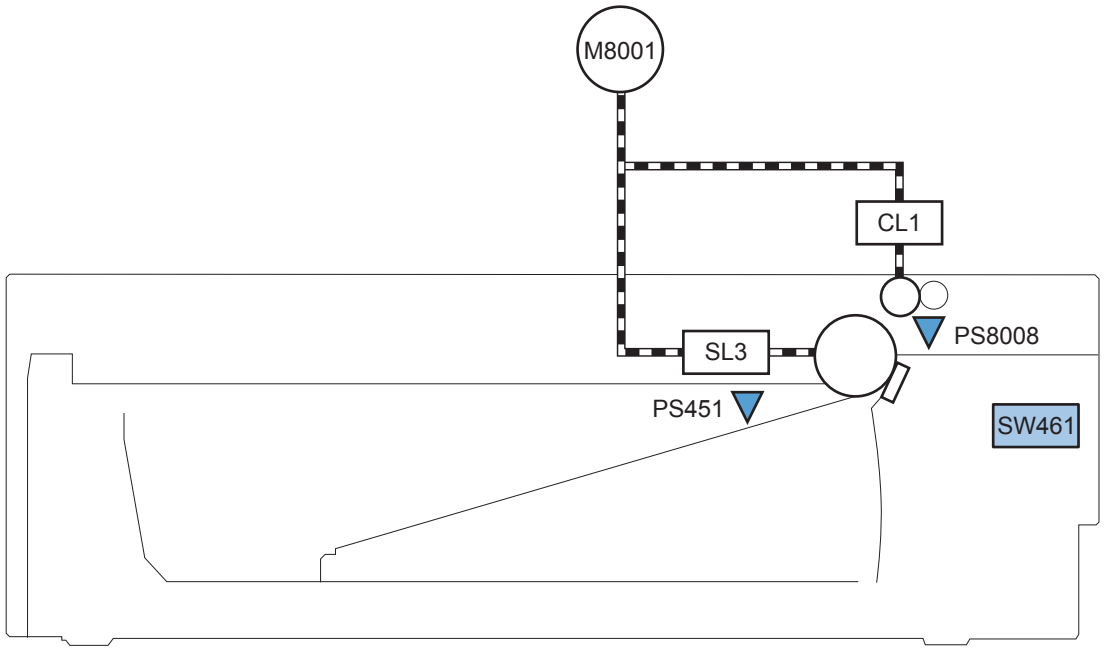


Table 1-11 Photo sensors and switches (Tray 3 and Tray 4)

Item	Description
PS451	Paper feeder cassette-media presence sensor
PS8008	Paper feeder media-feed sensor
SW461	Paper feeder cassette presence switch

NOTE: Tray 3 and Tray 4 are identical 500-sheet input trays.

Solenoids and clutches

Figure 1-28 Solenoids and clutches (product)

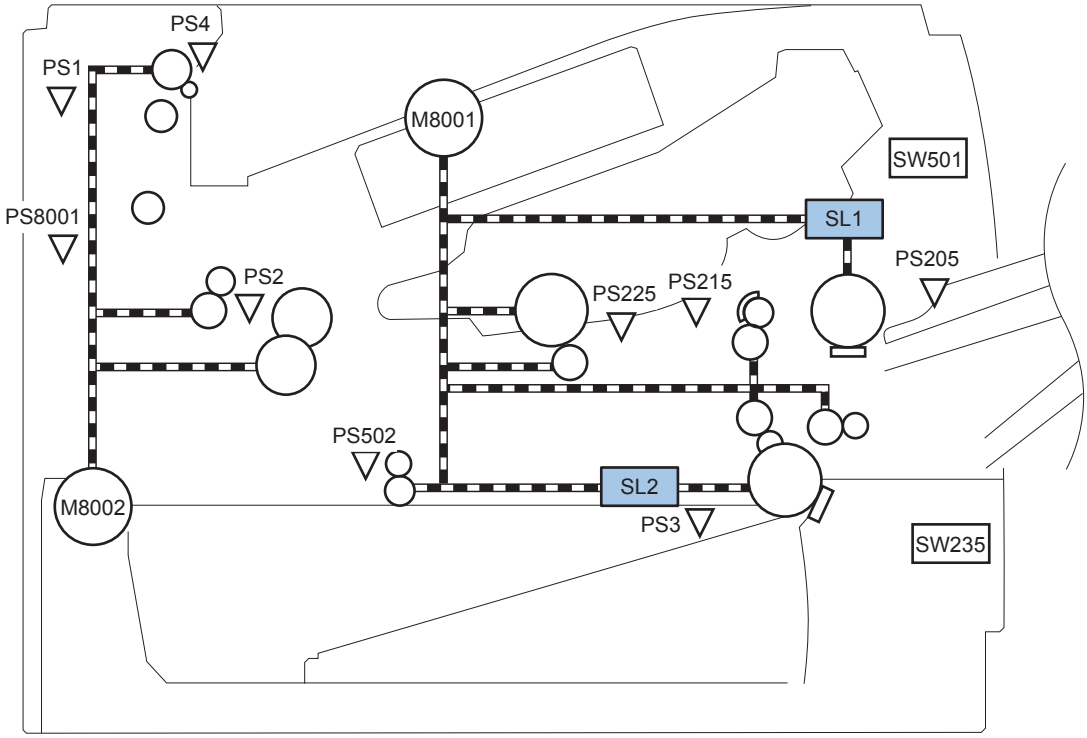


Table 1-12 Solenoids and clutches (product)

Item	Description
SL1	Tray 1 (multipurpose tray) pickup solenoid
SL2	Cassette (Tray 2) pickup solenoid

Figure 1-29 Solenoids and clutches (Tray 3 and Tray 4)

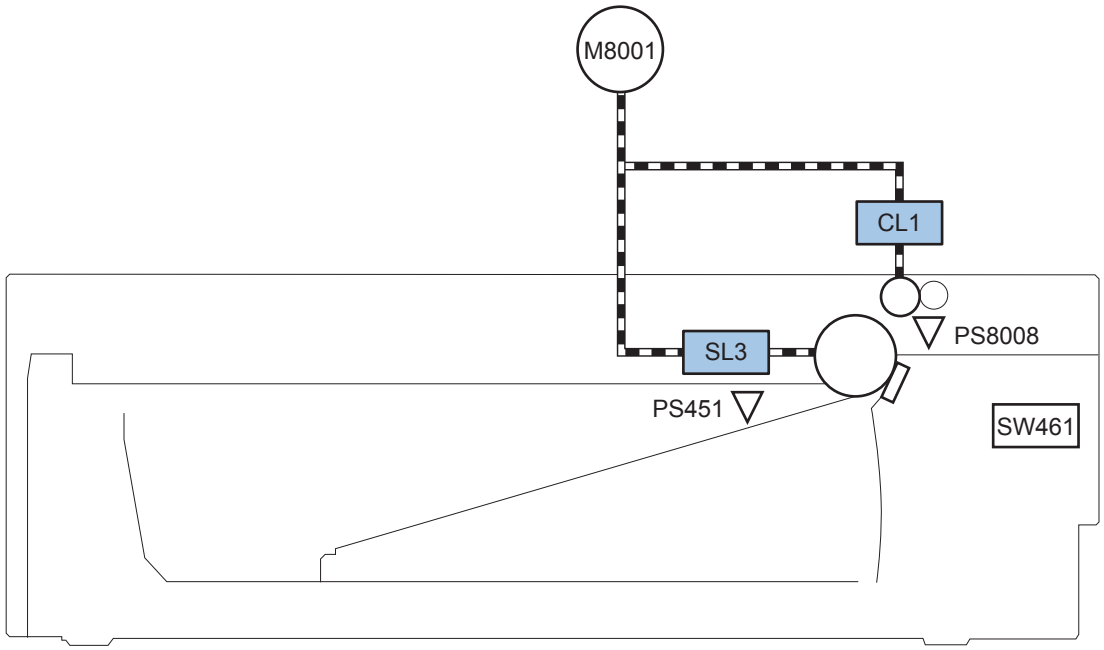


Table 1-13 Solenoids and clutches (Tray 3 and Tray 4)

Item	Description
SL3	Paper feeder pickup solenoid
CL1	Paper feeder pickup clutch

NOTE: Tray 3 and Tray 4 are identical 500-sheet input trays.

Tray 1 or Tray 2

Pickup and feed unit

The pickup and feed unit uses the following components and processes.

Cassette paper size detection/cassette paper detection

NOTE: To find the following components, see Photo sensors and switches on page 36.

- PS3: cassette media-presence sensor
- PS225: media width sensor (detects media width *after* the media enters the paper path)

Cassette pickup

NOTE: To find the following components, see Solenoids and clutches on page 38.

- SL2: cassette (Tray 2) pickup solenoid

Tray 1 paper pickup

NOTE: To find the following components, see Photo sensors and switches on page 36 and Solenoids and clutches on page 38.

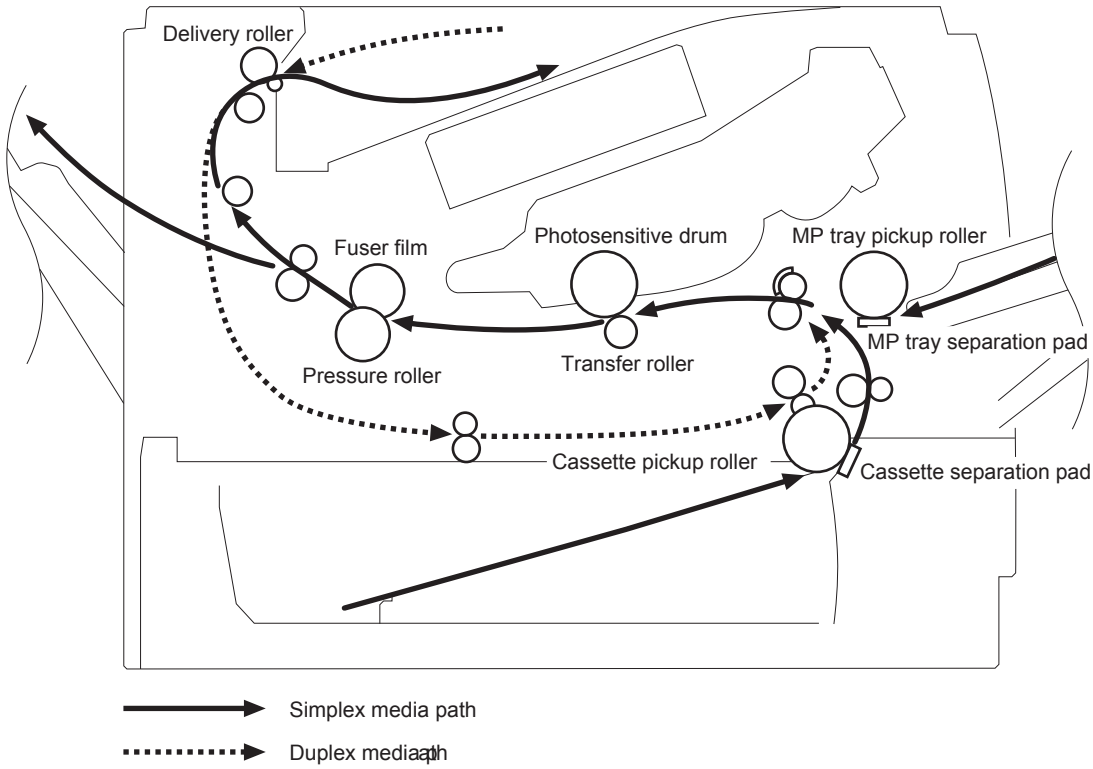
- PS205: Tray 1 (multipurpose tray) media-presence sensor
- SL1: Tray 1 (multipurpose tray) pickup solenoid

Paper pickup and feed

The following figure shows the pickup and feed paper path.

NOTE: Duplex models include a duplex media-feed path for automatic two-sided printing.

Figure 1-30 Pickup, feed, and delivery block diagram



Jam detection

The product uses the following sensors to detect the presence of media and to check for jams. If media does not reach or pass each sensor within a specified time, the ECU determines that a jam has occurred and alerts the formatter.

NOTE: To find the following components, see Photo sensors and switches on page 36.

Table 1-14 Sensors

Paper Jam Sensors	PS2	fuser delivery sensor
	PS215	Top-of-Page (TOP) sensor
	PS502	Duplex media-feed sensor
Media present sensors	PS4	Face-down tray media-full sensor
	PS225	Media width sensor
	PS8008 **NOTE:** PS8008 is used in Tray 3 and Tray 4.	Paper feeder media-feed sensor

The product detects the following jams:

- Pickup delay jam
- Pickup stationary jam
- Delivery delay jam
- Delivery stationary jam
- Fuser wrapping jam
- Door open jam
- Residual media jam
- Duplex repickup jam

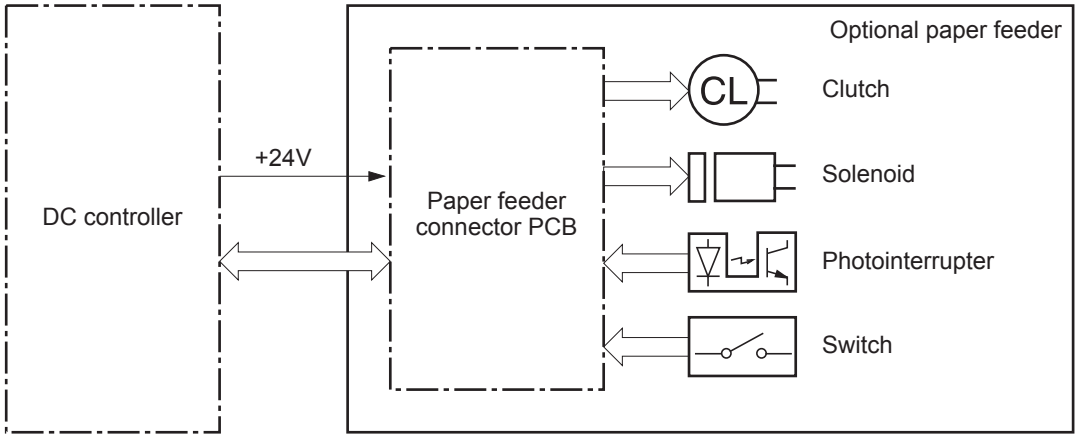
Additional tray

NOTE: This product supports identical 500-sheet input trays (Tray 3 and Tray 4).

Tray driver PCA

The following figure shows the signals between the DC controller and the tray driver PCA.

Figure 1-31 Tray 3 and Tray 4 driver PCA block diagram

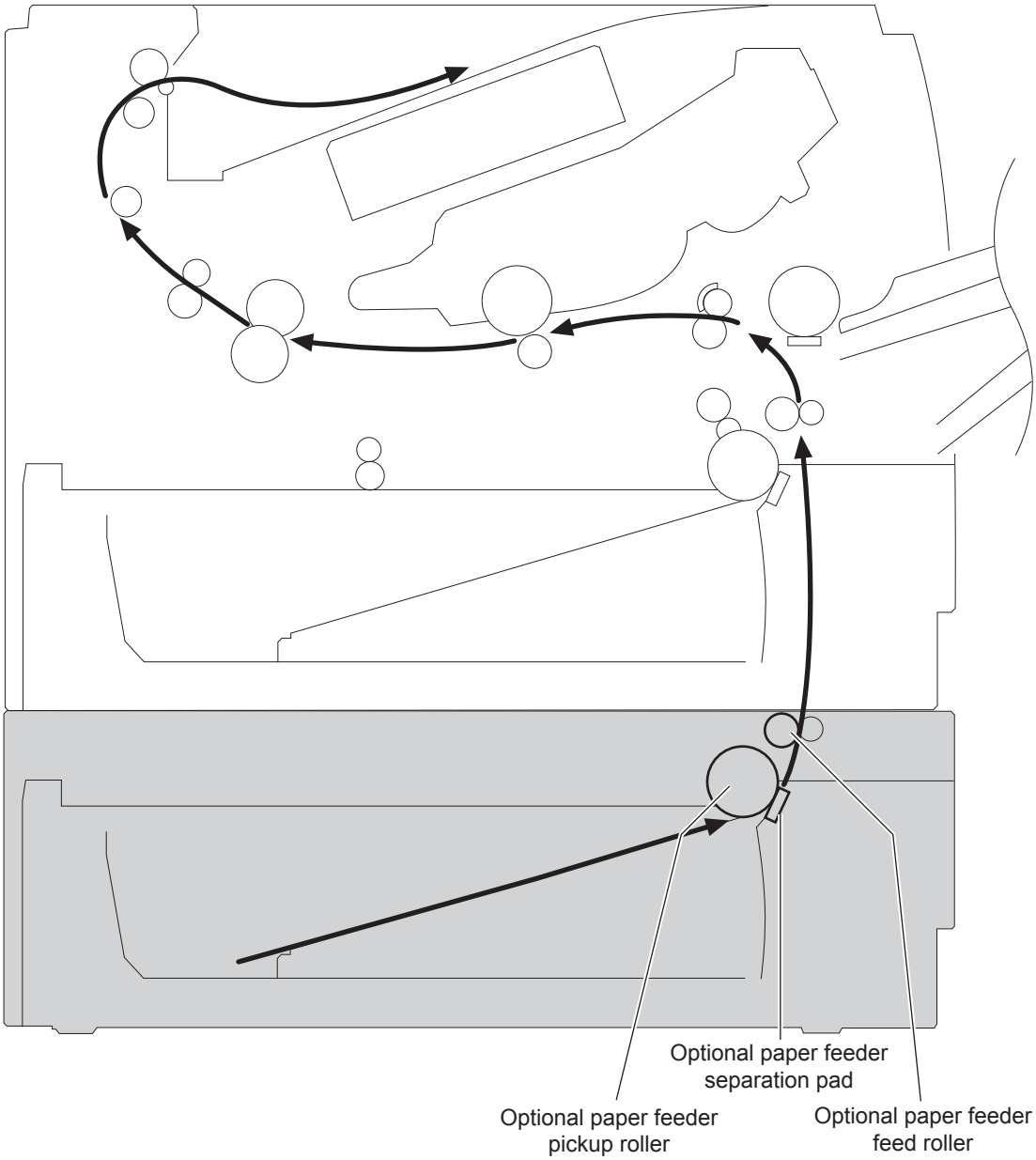


Paper pickup and feed

NOTE: Tray 3 and Tray 4 are identical 500-sheet input trays.

The following figure shows the pickup and feed paper path (Tray 3 shown).

Figure 1-32 Tray 3 and Tray 4 pickup, feed, and delivery block diagram



Paper level and size detection

- PS451: paper feeder media-presence sensor detects if media is present in the tray.

NOTE: PS451 is used in Tray 3 and Tray 4.

- Media size is detected after the page enters the product. See Cassette paper size detection/ cassette paper detection on page 40.

Jam detection

- PS8008: paper feeder media-feed sensor detects jams in the paper feeder.

Scanning/image capture system

Control panel

The control panel is an 8 in full color SVGA (800 x 600 LCD) with capacitive touchscreen and adjustable viewing angle. The control panel includes a USB port for walk-up printing and a hardware integration pocket for third-party USB devices such as card readers.

The control panel has a diagnostic mode to allow testing of the touchscreen, home button, and speaker. The control panel does not require calibration.

Scanner

The scanner is a carriage-type platen scanner which includes the frame, glass, LED optics, and a scanner controller board (SCB) attached to the back of the assembly. The scanner has a sensor to detect legal-sized media and a switch to indicate when the ADF is opened.

The ADF and control-panel assembly are attached to the scanner assembly. If the scanner fails, it can be replaced as a whole unit. The scanner replacement part does not include the ADF, SCB, or control-panel assembly.

Automatic document feed system

- Simplex single pass
- Duplex three pass
- Legal-sensing flag
- Pick and feed roller assembly with separation pad
- Mechanical deskew
- Step glass for ADF scanning
- Jam clearance door with sensing
- LED indication when original is placed on input tray

Sensors in the ADF

The ADF contains the following sensors:

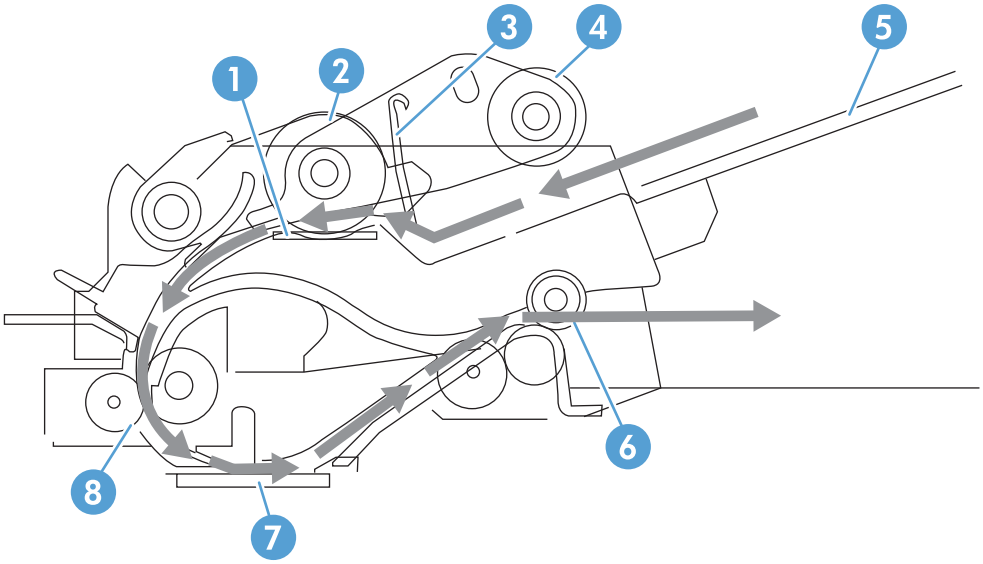
- **ADF-cover sensor:** Detects whether the ADF cover is open or closed.
- **Paper length sensor**: Detects whether there is a legal-size original.
- **Pick success sensor:** Detects the top of the page before sending a page through the ADF and the end of the page after feeding/scanning is complete.
- **Paper-present sensor:** Detects whether a document is present in the ADF. If paper is present in the ADF when copies are made, the product scans the document using the ADF. If no paper is present when copies are made, the product scans the document using the scanner glass.

- **Deskew sensor:** Detects the top of the page as it enters the deskew rollers.
- **Path sensor 1:** Detects the top of the page as it approaches the ADF glass.

ADF paper path

The ADF feeds documents past the ADF glass for scanning.

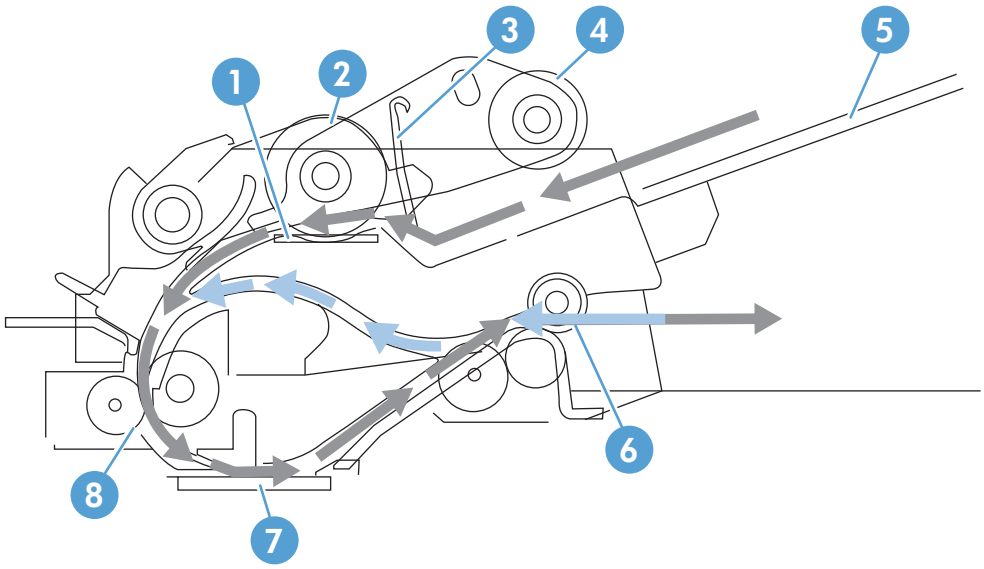
Figure 1-33 ADF path for single-sided documents



1	Separation pad	5	ADF input tray
2	Pickup roller	6	Delivery/duplex-feed rollers
3	Stack stop	7	ADF glass
4	Pre-pick roller	8	ADF feed rollers

For two-sided documents, the delivery rollers reverse the direction of each page to feed the second side of the document past the ADF glass.

Figure 1-34 ADF path for two-sided documents



NOTE: Callouts in Figure 1-34 ADF path for two-sided documents on page 48 are identical to callouts in Figure 1-33 ADF path for single-sided documents on page 47 .

Stapler (stapling models only)

The product includes a stapler capable of stapling 20 sheets of (75 g/m^2) (20 lb) paper. The stapler is powered by a +24v connection from the DC controller. Because there are no logic connections to the product, error conditions or out-of-staples indications are not displayed on the control panel.

2 Solve problems

NOTE: To perform diagnostic and configuration procedures (for example, resetting page counts) for the product, you must install the CP1210 Service Config Tool (available at your HP authorized repair center).

- Solve problems checklist
- Menu map
- Preboot menu options
- Current settings pages
- Troubleshooting process
- Tools for troubleshooting
- Clear jams
- Solve paper-handling problems
- Use manual print modes
- Solve image-quality problems
- Clean the product
- Solve performance problems
- Solve connectivity problems
- Service mode functions
- Solve fax problems
- Product upgrades

Solve problems checklist

Follow these steps when trying to solve a problem with the product.

1. If the control panel is blank or black, complete these steps:
   a. Check the power cable.
   b. Check that the power is turned on.
   c. Make sure that the line voltage is correct for the product power configuration. (See the label that is on the back of the product for voltage requirements.) If you are using a power strip and its voltage is not within specifications, connect the product directly into the electrical outlet. If it is already connected into the outlet, try a different outlet.
2. The control panel should indicate a Ready status. If an error message displays, resolve the error.
3. Check the cabling.
   a. Check the cable connection between the product and the computer or network port. Make sure that the connection is secure.
   b. Make sure that the cable itself is not faulty by using a different cable, if possible.
   c. Check the network connection.
4. Ensure that the selected paper size and type meet specifications. Also open the Trays menu on the product control panel and verify that the tray is configured correctly for the paper type and size.
5. Print a configuration page. If the product is connected to a network, an HP Jetdirect page also prints.
   a. From the Home screen on the product control panel, scroll to and touch the Administration button.
   b. Open the following menus:
      - Reports
      - Configuration/Status Pages
      - Configuration page
   c. Touch the Print button to print the page.

   If the pages do not print, check that at least one tray contains paper.

   If the page jams in the product, follow the instructions on the control panel to clear the jam.

   If the page does not print correctly, the problem is with the product hardware.

   If the page prints correctly, then the product hardware is working. The problem is with the computer you are using, with the print driver, or with the program.
6. Verify that you have installed the print driver for this product. Check the program to make sure that you are using the print driver for this product. The print driver is on the CD that came with the

product. You can also download the print driver from this Web site: www.hp.com/go/lj500MFPM525_software.

7. Print a short document from a different program that has worked in the past. If this solution works, then the problem is with the program. If this solution does not work (the document does not print), complete these steps:

   a. Try printing the job from another computer that has the product software installed.

   b. If you connected the product to the network, connect the product directly to a computer with a USB cable. Redirect the product to the correct port, or reinstall the software, selecting the new connection type that you are using.

Menu map

You can print a report of the complete Administration menu so you can more easily navigate to the individual settings you need.

1. From the Home screen on the product control panel, scroll to and touch the Administration button.
2. Open the following menus:
   - Reports
   - Configuration/Status Pages
3. Select the Administration Menu Map option.
4. Touch the Print button to print the report.

Preboot menu options

If an error occurs while the product is initializing, an error message displays on the control-panel display. The user can open the **Preboot** menus. The error menu item will not be seen if an error did not occur.

CAUTION: The Format Disk option performs a disk initialization for the entire disk. The operating system, firmware files, and third party files (among other files) will be completely lost. HP does not recommend this action.

Access the Preboot menu

1. Turn the product on.
2. The HP logo displays on the product control panel. When a "1/8" with an underscore displays below the HP logo, touch the logo to open the **Preboot** menu.
3. Use the arrow buttons on the touchscreen to navigate the **Preboot** menu.
4. Touch the OK button to select a menu item.

Cold reset using the Preboot menu

1. Turn the product on.
2. The HP logo displays on the product control panel. When a "1/8" with an underscore displays below the HP logo, touch the logo to open the **Preboot** menu.
3. Use the down arrow ▼ button to highlight Administrator, and then touch the OK button.
4. Use the down arrow ▼ button to highlight Startup Options item, and then touch the OK button.
5. Use the down arrow ▼ button to highlight the Cold Reset item, and then touch the OK button.
6. Touch the **ERROR ERROR! Target for reference type variable.varref, ID was not found! ERROR! ERROR! ERROR! ERROR! ERROR! ERROR! ERROR! ERROR! ERROR!** button to highlight Continue, and then touch the OK button.

NOTE: The product will initialize.

Table 2-1 Preboot menu options (1 of 6)

Menu option	First level	Second level	Third level	Description
Continue				Selecting the Continue item exits the **Preboot** menu and continues the normal boot process. If a selection is not made in the initial menu within 30 seconds, the product returns to a normal boot (the same as selecting Continue. If the user navigates to another menu, the timeout does not apply.
Sign In				Enter the administrator PIN or service PIN if one is required to open the **Preboot** menu.

Table 2-1 Preboot menu options (1 of 6) (continued)

Menu option	First level	Second level	Third level	Description
Administrator				This item navigates to the Administrator sub menus. If authentication is required (and the user is not already signed in) the Sign In displays. The user is required to sign in.
	Download	Network USB USB Thumbdrive		This item initiates a preboot firmware download process. A USB Thumbdrive option will work on all FutureSmart products. USB or Network connections are not currently supported.
	Format Disk			This item reinitializes the disk and cleans all disk partitions. **CAUTION:** Selecting the Format Disk item removes **all** data. A delete confirmation prompt is **not** provided. The system is **not** bootable after this action and a **99.09.67** error will be presented on the control panel. A firmware download must be performed to return the system to a bootable state.
	Partial Clean			This item reinitializes the disk (removing all data except the firmware repository where the master firmware bundle is downloaded and saved). **CAUTION:** Selecting the Partial Clean item removes **all** data except the firmware repository. A delete confirmation prompt is **not** provided. This allows user to reformat the disk by removing the firmware image from the active directory without having to download new firmware code (product remains bootable).
	Change Password			Select this item to set or change the administrator password.
	Clear Password			Select the Clear Password item to remove a password from the Administrator menu. Before the password is actually cleared, a message will be shown asking to confirm that the password should be cleared. Press the OK button to confirm the action. When the confirmation prompt displays, press the OK button to clear the password.

Table 2-2 Preboot menu options (2 of 6)

Menu option	First level	Second level	Third level	Description
Administrator continued	Manage Disk	Clear disk		Select the Clear disk item to disable using an external device for job storage. Job storage is normally enabled only for the Boot device. This will be grayed out unless the **99.09.68** error is displayed.
		Lock Disk		Select the Lock Disk item to lock (mate) a new secure disk to this product. The secure disk already locked to this product will remain accessible to this product. Use this function to have more then one encrypted disk accessible by the product when using them interchangeably. The data stored on the secure disk locked to this product always remains accessible to this product.
		Leave Unlocked		Select the Leave Unlocked item to use a new secure disk in an unlocked mode for single service event. The secure disk that is already locked to this product will remain accessible to this product and uses the old disk's encryption password with the new disk. The secure disk that is already locked to this product remains accessible to this product.
		Clear Disk Pwd		Select the Clear Disk Pwd item to continue using the non-secure disk and clear the password associated with the yet to be installed secure disk. **CAUTION:** Data on the missing secure disk will be permanently inaccessible.
		Retain Password		Select the Retain Password item to use the non-secure disk for this session only, and then search for the missing secure disk in future sessions.
		Boot Device	Secure Erase	Select the Secure Erase item to erase all of the data on the disk and unlock it if required. This might take a long time. **NOTE:** The system will be unusable until the system files are reinstalled. ATA secure-erase command one pass over write. Erases entire disk including firmware. The disk remains an encrypted disk.
			Erase/Unlock	Select the Erase/Unlock item to cryptographically erase all data on disk and unlock the disk to allow access to it from any product. **NOTE:** The system will be unusable until the system files are reinstalled. Erases the crypto key. The disk becomes a non-encrypted disk.
			Get Status	This item provides disk status information if any is available.

Table 2-3 Preboot menu options (3 of 6)

Menu option	First level	Second level	Third level	Description
Administrator continued	Manage Disk continued	Internal Device		Select the Internal Device item to erase the internal device or get status about the internal device.
			Secure Erase	Select the Secure Erase item to erase all of the data on the disk and unlock it if required. This might take a long time. **NOTE:** The system will be unusable until the system files are reinstalled. ATA secure-erase command one pass over write. Erases the entire disk, including firmware. The disk remains an encrypted disk.
			Erase/Unlock	Select the Erase/Unlock item to cryptographically erase all data on disk and unlock the disk to allow access to it from any product. **NOTE:** The system will be unusable until the system files are reinstalled. Erases the HP HIgh Performance Secure Hard Disk. The disk becomes a non-encrypted disk.
			Get Status	This item provides disk status information if any is available.
		External Device		Select the External Device item to erase the internal device or get status about the internal device.
			Secure Erase	Select the Secure Erase item to erase all of the data on the disk and unlock it if required. This might take a long time. **NOTE:** The system will be unusable until the system files are reinstalled. The ATA secure-erase command erases the entire disk, including firmware. The disk remains an encrypted disk.
			Erase/Unlock	Select the Erase/Unlock item to cryptographically erase all data on disk and unlock the disk to allow access to it from any product. **NOTE:** The system will be unusable until the system files are reinstalled. Erases the crypto key. The disk becomes a non-encrypted disk.
			Get Status	This item provides disk status information if any is available.

Table 2-4 Preboot menu options (4 of 6)

Menu option	First level	Second level	Third level	Description
Administrator continued	**Configure LAN**			Select the **Configure LAN** item to setup the network settings for the PreBoot menu firmware upgrade. The network can be configured obtain the network settings from a DHCP server or as static.
		IP Mode [DHCP]		Use this item for automatic IP address acquisition from the DHCP server.
		IP Mode [STATIC]		Use this item to manually assign the network addresses.
			IP Address	Use this item to manually enter the IP addresses.
			Subnet Mask	Use this item to manually enter the subnet mask.
			Default Gateway	Use this item to manually enter the default gateway.
			Save	Select the Save item to save the manual settings.

Table 2-5 Preboot menu options (5 of 6)

Menu option	First level	Second level	Third level	Description
Administrator continued	Startup Options			Select the Startup Options item to specify options that can be set for the next time the product is turned on and initializes to the Ready state.
		Show Revision		Not currently functional: Check the Show Revision item to allow the product to initialize and show the firmware version when the product reaches the Ready state. Once the product power is turned on the next time, the Show Revision item is unchecked so that the firmware revision is not shown.
		Cold Reset		Check the Cold Reset item to clear the IP address and all customer settings (this item also returns all settings to factory defaults). **NOTE:** Items in the Service menu are not reset.
		Skip Disk Load		Select the Skip Disk Load item to disable installed third-party applications.
		Skip Cal		Select the Skip Cal item to initialize the product the next time the power is turned on without calibrating.
		Lock Service		**CAUTION:** Select the Lock Service item to lock the Service menu access (both in the preboot menu and the Device Maintenance menu). Service personnel must have the administrator remove the Lock Service setting before they can open the Service menu.
		Skip FSCK		Select the Skip FSCK item to disable Chkdisk/ScanVolume during startup.

Table 2-5 Preboot menu options (5 of 6) (continued)

Menu option	First level	Second level	Third level	Description
Administrator continued	Startup Options continued	First Power		Not currently functional: This item allows the product to initialize as if it is the first time it has been turned on. For example, the user is prompted to configure first-time settings like date/time, language, and other settings. Check this item so that it is enabled for the next time the product power is turned on. When the product power is turned on the next time, this item is unchecked so that the pre-configured settings are used during configuration, and the first-time setting prompt is not used.
		Embedded JetDirect Off		Check the Embedded JetDirect Off item to disable the embedded Jetdirect. By default this item is unchecked so that Jetdirect is always enabled.
		WiFi Accessory		Check the WiFi Accessory item to enable the WiFi accessory.

Table 2-6 Preboot menu options (6 of 6)

Menu option	First level	Second level	Third level	Description
Administrator continued	Diagnostics	Memory	Do Not Run	Diagnostic items are useful for troubleshooting formatter problems. Use the options below the Do Not Run item to help troubleshoot formatter problems.
			Short	
			Long	
		Disk	Do Not Run	
			Short	
			Long	
			Optimized	
			Raw	
			Smart	
		ICB		
		CPB		
		Interconnect Run Selected		
	Remote Admin	Start Telnet		The Remote Admin item allows a service technician to access the product remotely to troubleshoot issues.
		Stop Telnet		
		Refresh IP		

Table 2-6 Preboot menu options (6 of 6) (continued)

Menu option	First level	Second level	Third level	Description
	System Triage	Copy Logs		If you cannot print the error logs, the System Triage item allows you to copy the error logs to a flash drive on the next startup. The files can then be sent to HP to help determine the problem.
Service Tools				This item requires the service access code. If the product does not reach the Ready state, you can use this item to print the error logs. The logs can be copied to a USB storage accessory when the product is initialized, and then these files can be sent to HP to help determine what is causing the problem.
	Reset Password			Use this item to reset the administrator password.
	Subsystems			For manufacturing use only. Do not change these values.
Developer Tools	Netexec			

Current settings pages

Printing the current settings pages provides a map of the user configurable settings that might be helpful in the troubleshooting process.

1. From the Home screen on the product control panel, scroll to and touch the Administration button.
2. Open the following menus:
   - Reports
   - Configuration/Status Pages
3. Select the Current Settings Page option.
4. Touch the Print button to print the report.

Troubleshooting process

Determine the problem source

When the product malfunctions or encounters an unexpected situation, the product control panel alerts you to the situation. This section contains a pre-troubleshooting checklist to filter out many possible causes of the problem. A troubleshooting flowchart helps you diagnose the root cause of the problem. The remainder of this chapter provides steps for correcting problems.

- Use the troubleshooting flowchart to pinpoint the root cause of hardware malfunctions. The flowchart guides you to the section of this chapter that contains steps for correcting the malfunction.

Before beginning any troubleshooting procedure, check the following issues:

- Are supply items within their rated life?
- Does the configuration page reveal any configuration errors?

NOTE: The customer is responsible for checking supplies and for using supplies that are in good condition.

Troubleshooting flowchart

This flowchart highlights the general processes that you can follow to quickly isolate and solve product hardware problems.

Each row depicts a major troubleshooting step. A "yes" answer to a question allows you to proceed to the next major step. A "no" answer indicates that more testing is needed. Go to the appropriate section in this chapter, and follow the instructions there. After completing the instructions, go to the next major step in this troubleshooting flowchart.

Table 2-7 Troubleshooting flowchart

1 **Power on**	Is the product on and does a readable message display?		Follow the power-on troubleshooting checks. See Power subsystem on page 62. After the control panel display is functional, see step 2.
	Yes ↓	No →	
2 **Control panel messages**	Does the message **Ready** display on the control panel?		After the errors have been corrected, go to step 3.
	Yes ↓	No →	
3 **Event log**	Open the Troubleshooting menu and print an event log to see the history of errors with this product. Does the event log print?		If the event log does not print, check for error messages. If paper jams inside the product, see the jams section of the product service manual. If error messages display on the control panel when you try to print an event log, see the control panel message section of the service manual. After successfully printing and evaluating the event log, see step 4.
	Yes ↓	No →	

Table 2-7 Troubleshooting flowchart (continued)

4 **Information pages**	Open the Reports menu and print the configuration pages to verify that all the accessories are installed. Are all the accessories installed?		If accessories that are installed are not listed on the configuration page, remove the accessory and reinstall it. After evaluating the configuration pages, see step 5.
	Yes ↓	No →	
5 **Image quality**	Does the print quality meet the customer's requirements?		Compare the images with the sample defects in the image defect tables. See the images defects table in the product service manual. After the print quality is acceptable, see step 6.
	Yes ↓	No →	
6 **Interface**	Can the customer print successfully from the host computer?		Verify that all I/O cables are connected correctly and that a valid IP address is listed on the Jetdirect configuration page. If error messages display on the control panel when you try to print an event log, see the control panel message section of the service manual. When the customer can print from the host computer, this is the end of the troubleshooting process.
	Yes. This is the end of the troubleshooting process.	No →	

Power subsystem

Power-on checks

The basic product functions should start up when the product is connected into an electrical outlet and the power switch is pushed to the *on* position. If the product does not start, use the information in this section to isolate and solve the problem.

Power-on troubleshooting overview

Turn on the product power. If the control panel display remains blank, random patterns display, or asterisks remain on the control panel display, perform power-on checks to find the cause of the problem.

During normal operation, the main cooling fan begins to spin briefly after the product power is turned on. Place your hand over the holes in the left-side cover, near the formatter. If the fan is operating, you will feel air passing out of the product. You can also lean close to the product and hear the fan operating. You can also place your hand over the hole in the right-rear lower corner. If the fan is operating, you should feel air being drawn into the product. When this fan is operational, the DC side of the power supply is functioning correctly.

After the fan is operating, the main motor turns on (unless the right or front cover is open, a jam condition is sensed, or the paper-path sensors are damaged). You might be able to visually and audibly determine if the main motor is turned on.

If the fan and main motor are operating correctly, the next troubleshooting step is to isolate print engine, formatter, and control panel problems. Perform an engine test. If the formatter is damaged, it might interfere with the engine test. If the engine-test page does not print, try removing the formatter

and then performing the engine test again. If the engine test is then successful, the problem is almost certainly with the formatter, the control panel, or the cable that connects them.

If the control panel is blank when you turn on the product, check the following items.

1. Make sure that the product is connected directly into an active electrical outlet (not a power strip) that delivers the correct voltage.
2. Make sure that the power switch is in the *on* position.
3. Make sure that the fan runs briefly, which indicates that the power supply is operational.
4. Make sure that the control panel display wire harness is connected.
5. Make sure that the formatter is seated and operating correctly. Turn off the product and remove the formatter. Reinstall the formatter, and then verify that the heartbeat LED is blinking.
6. Remove any external solutions, and then try to turn the product on again.

NOTE: If the control panel display is blank, but the main cooling fan runs briefly after the product power is turned on, try printing an engine-test page to determine whether the problem is with the control-panel display, formatter, or other product assemblies.

Control-panel checks

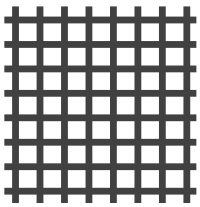
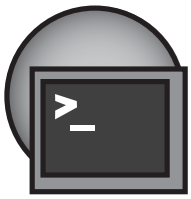
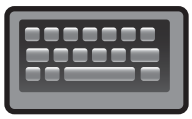
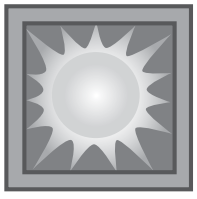
The product includes a diagnostic test mode for the control panel. This mode allows you to troubleshoot issues with the touchscreen, speaker, and Home button.

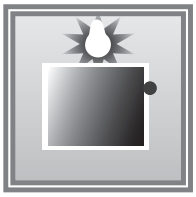
Start diagnostic mode

- On the rear side of the control panel, use a paperclip to press the button inside the small hole in the center of the control panel.

NOTE: Some of the diagnostic tests are for factory use only.

	Exits a test
	Selects test settings

	Verifies that all areas respond to a touch
	Checks calibration
	Selects a test pattern to view on the display.
	Tests sounds
	Shows the firmware version
	Factory use only
	Not applicable for this model
	Adjusts the backlight

	Checks the ambient light sensor
	Tests the home button

Exit diagnostic mode

Do one of the following:

- Touch the Cancel button.
- Wait 20 seconds and the control panel will return to the Home screen.

Scanning subsystem

Calibrate the scanner

Use this procedure to properly position the copied image on the page.

TIP: This adjustment might be required after the scanner or document feeder are replaced.

1. From the Home screen on the product control panel, scroll to and touch the Device Maintenance button.
2. Touch the Calibration/Cleaning button.
3. Touch the Calibrate Scanner button, and then follow the instructions provided on the screen.

Tools for troubleshooting

The section describes the tools that can help you solve problems with your device.

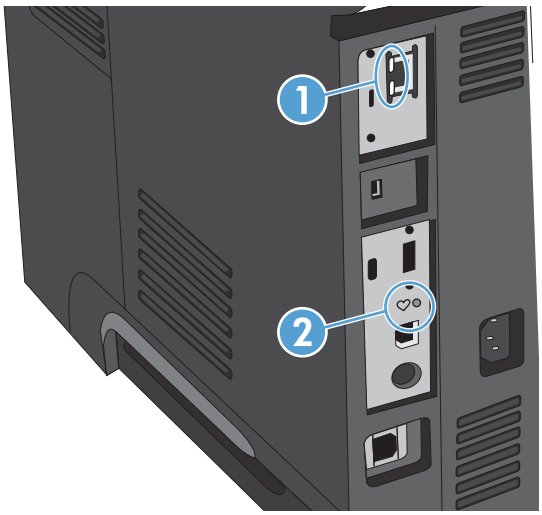
Individual component diagnostics

LED diagnostics

LED, engine, and individual diagnostics can identify and troubleshoot product problems.

Understand lights on the formatter

Two LEDs on the formatter indicate that the product is functioning correctly.



1	Heartbeat LED
2	HP Jetdirect LEDs

Heartbeat LED

The heartbeat LED provides information about product operation. If a product error occurs, the formatter displays a message on the control-panel display. However, error situations can occur causing the formatter to control panel communication to be interrupted.

NOTE: HP recommends fully troubleshooting the formatter and control panel before replacing either assembly. Use the heartbeat LED to troubleshoot formatter and control panel errors to avoid unnecessarily replacing these assemblies.

Formatter to control panel communication interruptions

- The firmware does not fully initialize and configure the control panel interface.
- The control panel is not functioning (either a failed assembly or power problem).
- Interface cabling between the formatter and control panel is damaged or disconnected.

TIP: If the heartbeat LED is illuminated—by an error condition or normal operation—the formatter is fully seated and the power is on. The pins for the LED circuit in the formatter connector are recessed so that this LED will not illuminate unless the formatter is fully seated.

The heartbeat LED operates according to the product state. When the product is initializing, see Heartbeat LED, product initialization on page 67.

Heartbeat LED, product initialization

The following table describes the heartbeat LED operation while the product is executing the firmware boot process.

NOTE: When the initialization process completes the heartbeat LED should be illuminated solid green—the LED is off if the product is in Sleep Mode.

Table 2-8 Heartbeat LED, product initialization

Product initializing state	Heartbeat LED, normal state	Heartbeat LED, error state
No power (power cable disconnected or power switch off)	Off	Not applicable
Power on (immediately after the power switch pressed)	Red, solid • Duration should be 1 second or less	Red, solid • Firmware error; problem finding hardware and booting the serial peripheral interface flash memory ◦ Boot process halted Replace the formatter.
Serial peripheral interface (SPI) flash memory boot	Green, solid	Red, solid • Firmware error; problem corrupt or missing SPI flash memory ◦ Boot process halted Replace the formatter.
HW checks on board DRAM	Green, solid	Red, solid • Power on self check failure ◦ Boot process halted Replace the formatter.
Control panel connection initializes	Green, solid **NOTE:** Control panel communication successful. If an error occurs, a message should appear on the control-panel display.	Yellow, fast flash • Formatter to control panel connection failed ◦ Boot process continues Check the cables between the formatter and control panel for damage. Make sure that the cables are fully seated.

Table 2-8 Heartbeat LED, product initialization (continued)

Product initializing state	Heartbeat LED, normal state	Heartbeat LED, error state
Preboot menu available (including diagnostics)	Green, solid	Red, solid • Diagnostic failure ◦ Follow diagnostic instructions Turn the power off, and then on again to restart the initialization process.
Accessing disk for firmware image	Green, solid **NOTE:** If applicable, disk error messages appear on the control-panel display.	Yellow, fast flash • Control panel not connected
Firmware boot	Green, solid **NOTE:** If applicable, error messages appear on the control-panel display.	Yellow, fast flash • Control panel not connected
Product operational	Green, heartbeat blink **NOTE:** If applicable, error messages appear on the control-panel display.	Yellow, fast flash • Control panel not connected
49.xx.yy	Not applicable	LED off **NOTE:** An error message (for example, **49.xx.yy**) might appear on the control-panel display. Eventually a formatter connection missing message will appear. Turn the power off, and then on again to restart the initialization process. If the error persists, perform a firmware upgrade.
Control panel connection interrupted after the product is operational	Not applicable	Yellow, fast flash • Control panel not connected
Sleep Mode	Green, slow blink	Not applicable
Approaching Sleep Mode	Green, slow blink	Not applicable
Wake up from Sleep Mode	Follows initialization progression.	Follows initialization progression.
Approaching wake up from Sleep Mode	Follows initialization progression.	Follows initialization progression.

HP Jetdirect LEDs

The embedded HP Jetdirect print server has two LEDs. The yellow LED indicates network activity, and the green LED indicates the link status. A blinking yellow LED indicates network traffic. If the green LED is off, a link has failed.

For link failures, check all the network cable connections. In addition, you can try to manually configure the link settings on the embedded print server by using the product control-panel menus.

1. From the Home screen on the product control panel, scroll to and touch the Administration button.
2. Open the following menus:
   - Network Settings
   - Embedded Jetdirect Menu
   - Link Speed
3. Select the appropriate link speed, and then touch the OK button.

Engine diagnostics

The product contains extensive internal engine diagnostics that help in troubleshooting print quality, paper path, noise, assembly, and timing issues.

Engine-test button

To verify that the product engine is functioning, print an engine-test page.

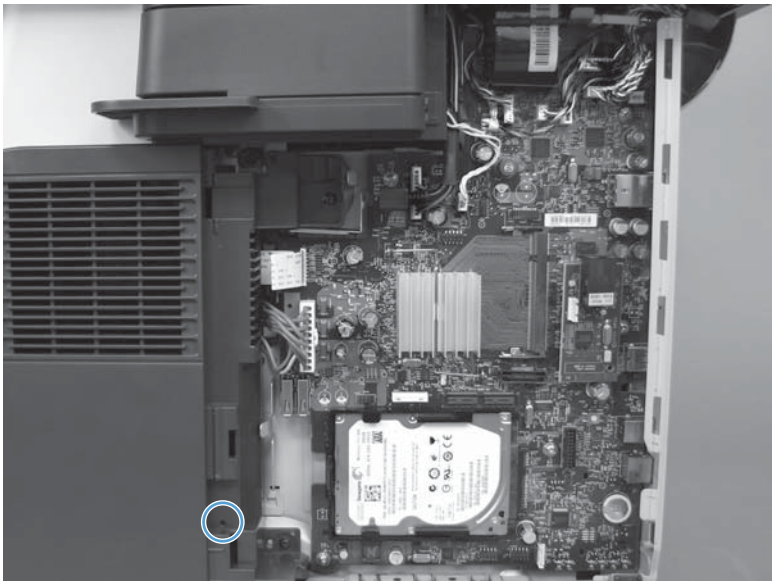
Print the engine test pages

NOTE: A damaged formatter might interfere with the engine test. If the engine test page does not print, try removing the formatter and performing the engine test again. If the engine test is then successful, the problem is in the formatter, the control panel, or the cable that connects them together.

1. Remove the formatter cover.

2. Press the engine test-page button.

Figure 2-1 Locating the engine-test-page switch



The test page should have a series of horizontal lines. The test page prints from the last tray that the product used to print, unless the product has been turned off and then turned on again since the most recent print job. If the product has been turned off and then on again since the most recent print job, then the page will print from Tray 2. The product continuously prints test pages as long as the test-page switch is depressed. The product will not print a test page if it is in Sleep mode.

Print formatter test pages

If the engine test was successful with the formatter removed, reinstall the formatter and then print a configuration page to test the functionality of the formatter.

1. From the Home screen on the product control panel, scroll to and touch the Administration button.
2. Open the following menus:
   - Troubleshooting
   - Print Quality Pages
   - Fuser Test Page
3. Touch the Print button.

Paper path test

This diagnostic test generates one or more test pages that you can use to isolate the cause of jams.

To isolate a problem, specify which input tray to use, specify whether to use the duplex path, and specify the number of copies to print. Multiple copies can be printed to help isolate intermittent problems. The following options become available after you start the diagnostic feature:

- Print Test Page. Run the paper-path test from the default settings: Tray 2, no duplex, and one copy. To specify other settings, scroll down the menu and select the setting, and then scroll back up and select Print Test Page to start the test.
- Source Tray. Select Tray 1, Tray 2, or the optional tray.
- Output Bin. Select All bins, Face down, or Face up.
- Test Duplex Path. Enable or disable two-sided printing.
- Number of Copies. Set the numbers of copies to be printed; the choices are 1,10, 50, 100, or 500.

1. From the Home screen on the product control panel, scroll to and touch the Administration button.
2. Open the following menus:
   - Troubleshooting
   - Diagnostic Tests
   - Paper Path Test
3. Select the paper-path test options for the test you want to run.

Paper path sensors test

This test displays the status of each paper-path sensor and allows viewing of sensor status while printing internal pages.

1. From the Home screen on the product control panel, scroll to and touch the Administration button.
2. Open the following menus:
   - Troubleshooting
   - Diagnostic Tests
   - Paper Path Sensors

NOTE: Exiting the Paper-path sensor test menu and then reentering it will clear the test values from the previous test.

Table 2-9 Paper-path sensors

Sensor name	Sensor number	Replacement part number	Description	Paper-path sensor test name
Top sensor	PS215	RM1-8617-000CN	Top sensor PCA	PS215 Top

Table 2-9 Paper-path sensors (continued)

Sensor name	Sensor number	Replacement part number	Description	Paper-path sensor test name
Paper width sensor	PS225	RM1-8618-000CN	Paper width sensor PCA	PS225 Paper Width 1
Fuser delivery sensor	PS2	RM1-8505-000CN	Fuser (universal)	PS2 Fuser Output
Duplex media-feed sensor	PS502	RM1-8519-000CN	HVPS	PS502 Duplexer Refeed
Rear cover open sensor	PS1	WG8-8519-000CN	Photointerrupter	PS1 Rear Door
Face-down media tray media-full sensor	PS4	Photo interruptor: WG8-8519-000CN Top-cover assembly: RM1-8516-000CN	Photointerrupter Top cover assembly	PS4 Output Bin Full
Paper feeder media-feed sensor - Tray 3[1]	PS8008	CE530-69001	Tray 3 feeder unit	PS8008 Tray 3 feed sensor
Paper feeder media-feed sensor - Tray 4[1]	PS8008	CE530-69001	Tray 4 feeder unit	PS8008 Tray 4 feed sensor

[1] Tray 3 and Tray 4 use a PS8008 sensor.

Manual sensor test

Performs tests to determine whether the paper-path sensors are operating correctly.

1. From the Home screen on the product control panel, scroll to and touch the Administration button.
2. Open the following menus:
   - Troubleshooting
   - Diagnostic Tests
   - Manual Sensor Test

Table 2-10 Manual sensor tests

Sensor or switch name	Sensor number	Replacement part number	Description	Paper-path sensor test name	Testing of sensor
Cartridge-door switch	SW501	RM1-8499-000CN	Interlock switch	SW501 Cartridge Door	Open the cartridge door.
Face-up detect sensor	PS8001	WG8-5935-000CN	Photointerrupter	PS8001 Rear Door	Open the rear door to about 90 degrees.
Paper feeder media-feed sensor - Tray 3[1]	PS8008	CE530-69001	Tray 3 feeder unit	PS8008 Tray 3 Feed sensor	Remove the Tray 2 cassette, use a small screwdriver to activate the sensor through the small slot toward the front of the product.
Top sensor	PS215	RM1-8617-000CN	Top sensor PCA	PS215 Top	Open the cartridge door, remove the toner cartridge, raise the registration shutter, and then use a screwdriver to activate the sensor.
Paper width sensor	PS225	RM1-8618-000CN	Paper-width sensor PCA	PS225 Paper Width 1	Open the cartridge door, remove the toner cartridge, and then lift the registration flap to activate the sensor.
Fuser delivery sensor	PS2	RM1-8505-000CN	Fuser (universal)	PS2 Fuser Output	Open the rear door, and then use a screwdriver to activate the sensor.
Duplex media-feed sensor	PS502	RM1-8519-000CN	HVPS	PS502 Duplexer Refeed	Remove the Tray 2 cassette, push the green button to drop the duplex tray, and then raise the tray.

Table 2-10 Manual sensor tests (continued)

Sensor or switch name	Sensor number	Replacement part number	Description	Paper-path sensor test name	Testing of sensor
Paper feeder media-feed sensor - Tray 4[1]	PS8008	CE530-69001	Tray 4 feeder unit	PS8008 Tray 4 Feed sensor	Remove the Tray 4 cassette, use a small screwdriver to activate the sensor through the small slot toward the front of the product.
Rear cover open sensor	PS1	WG8-8519-000CN	Photointerrupter	PS1 Rear door	Lift the face-down tray output levers to activate the sensor.
Face-down media tray media-full sensor	PS4	Photo interruptor: WG8-8519-000CN Top cover assembly: RM1-8516-000CN	Photointerrupter Top cover assembly	PS4 Output Bin Full	Open the rear door to about 15 degrees.

[1] Tray 3 and Tray 4 use a PS8008 sensor.

SW501 Cartridge door switch test

Test the cartridge door switch (SW501)

1. Open the cartridge door to activate the sensor.

   Figure 2-2 Test the cartridge door switch

2. Check the control-panel display for sensor response.
3. If there is no response, make sure that the sensor-actuator tab on the door is not damaged or missing.

   If necessary, replace the cartridge-door switch.

PS8001 Rear door sensor test

Test the rear door sensor (PS8001)

1. Open the rear door, and then gently pull down on the door and lower the door until it is fully open to activate the sensor.

Figure 2-3 Test the rear door sensor (1 of 2)

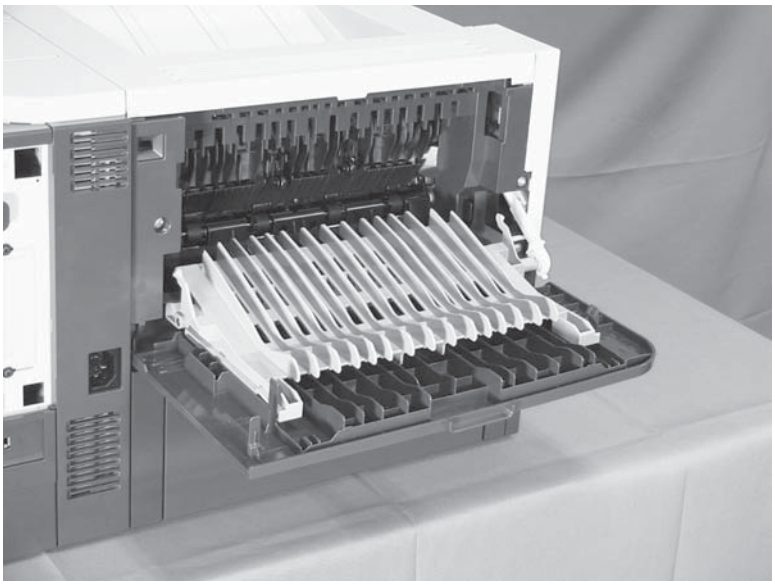
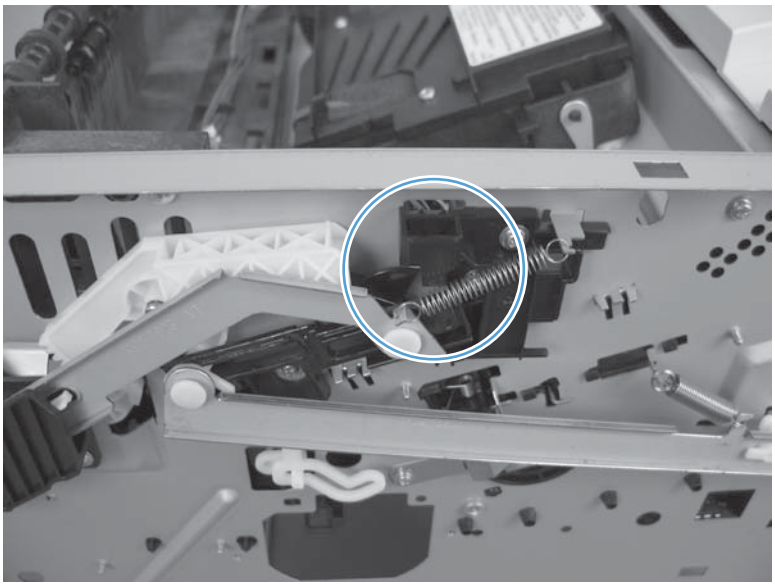


Figure 2-4 Test the rear door sensor (2 of 2)



2. Check the control-panel display for sensor response.
3. If there is no response, make sure that the sensor-actuator tab on the door is not damaged or missing.

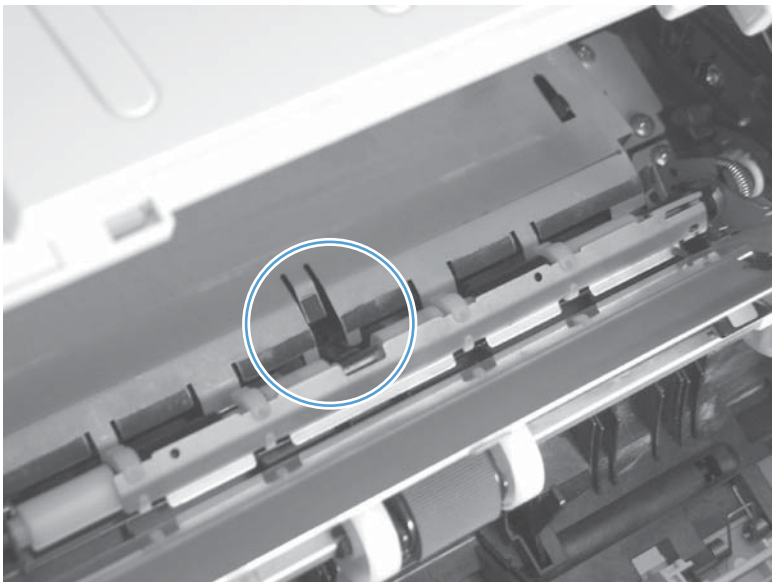
   If necessary, replace the rear door sensor.

PS215 Top (Top-of-Page) sensor test

Test the Top sensor (PS215)

1. Open the cartridge door, and then remove the toner cartridge.
2. Raise the registration shutter.
3. Use a small screwdriver to activate the Top sensor.

Figure 2-5 Test the Top sensor



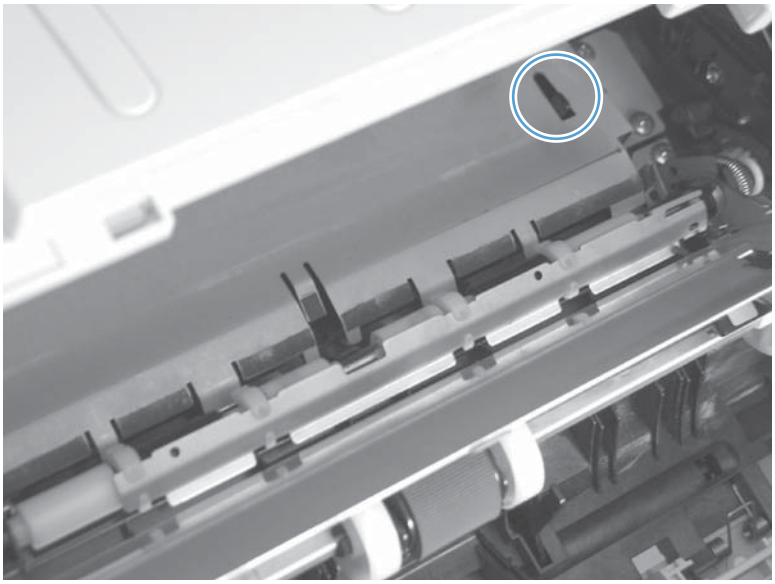
4. Check the control-panel display for sensor response.
5. If there is no response, replace the Top sensor (RM1-8617-000CN).

PS225 Paper width 1 sensor test

Test the paper width sensor (PS225)

1. Open the cartridge door, and then remove the toner cartridge.
2. Raise and then lower the registration flap to activate the sensor.

Figure 2-6 Test the paper width sensor



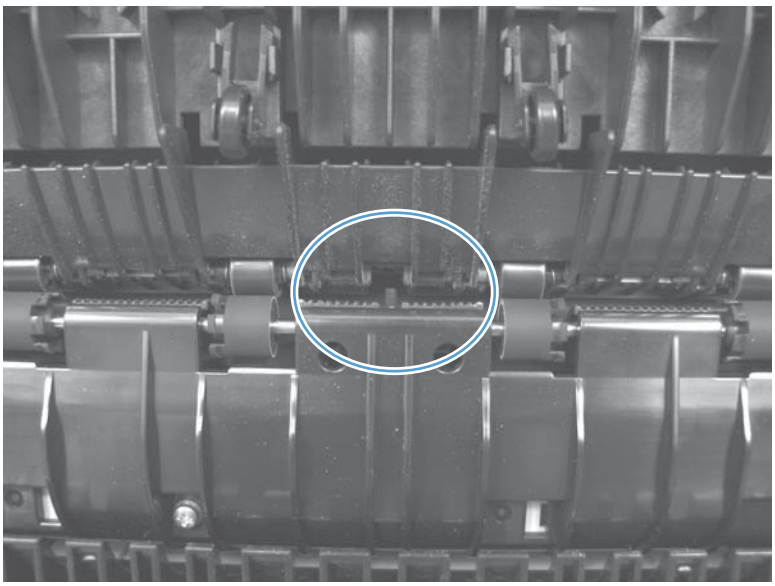
3. Check the control-panel display for a sensor response.
4. If there is no response, replace the paper width sensor PCA (RM1-8618-000CN).

PS2 Fuser output sensor test

Test the fuser output sensor (PS2)

1. Open the rear door.
2. Slowly insert a piece of paper to activate the fuser output sensor.

Figure 2-7 Test the fuser output sensor



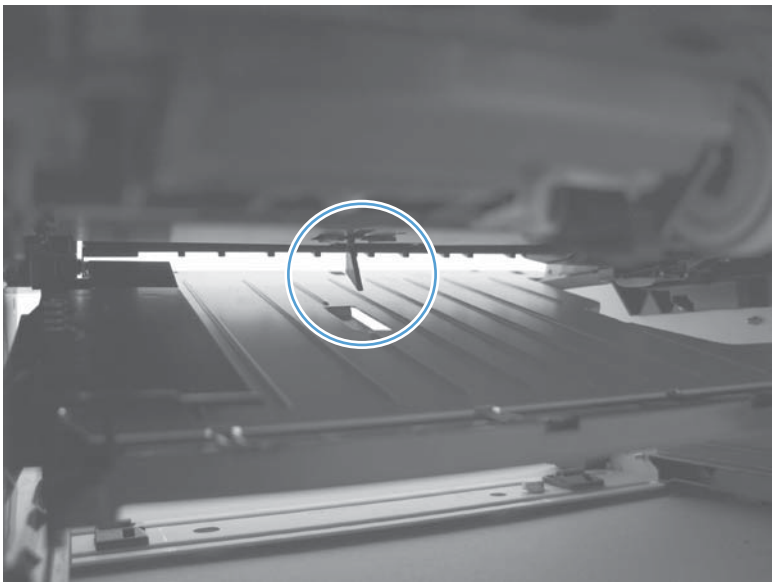
3. Check the control-panel display for a sensor response.
4. If there is no response, replace the fuser (RM1-8508-000CN).

PS502 Duplexer refeed sensor test

Test the duplexer refeed sensor (PS502)

1. Remove the Tray 2 cassette.
2. Press the green lever to release the duplex media-feed assembly (metal tray).
3. Raise the duplex media-feed assembly until it snaps into place.

Figure 2-8 Test the duplexer refeed sensor



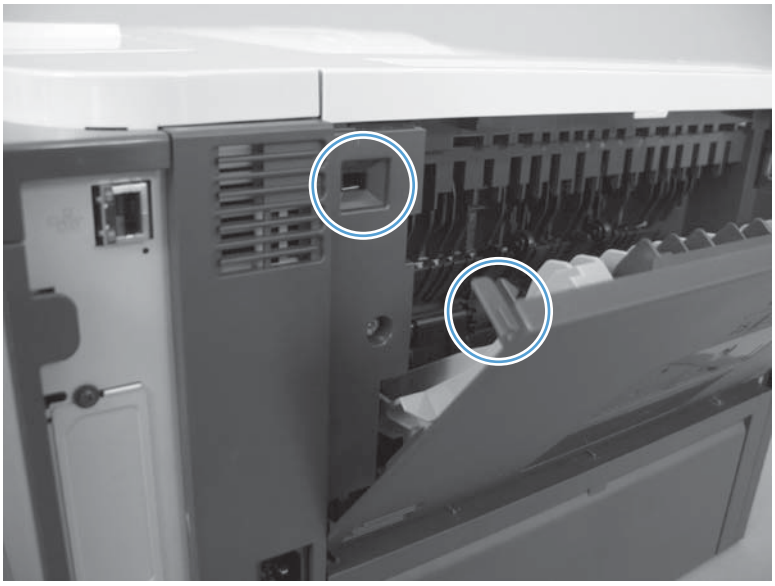
4. Check the control-panel display for sensor response.
5. If there is no response, replace the high-voltage power supply.

PS1 Rear bin sensor test

Test the rear bin sensor (PS1)

1. Open the rear door until it stops to activate the sensor.

Figure 2-9 Test the rear bin sensor



2. Check the control-panel display for sensor response.
3. If there is no response, replace the rear bin sensor.

PS4 Output bin full sensor test

Test the output bin full sensor (PS4)

1. Raise and then lower the output-bin levers to activate the sensor.

Figure 2-10 Test the output bin full sensor

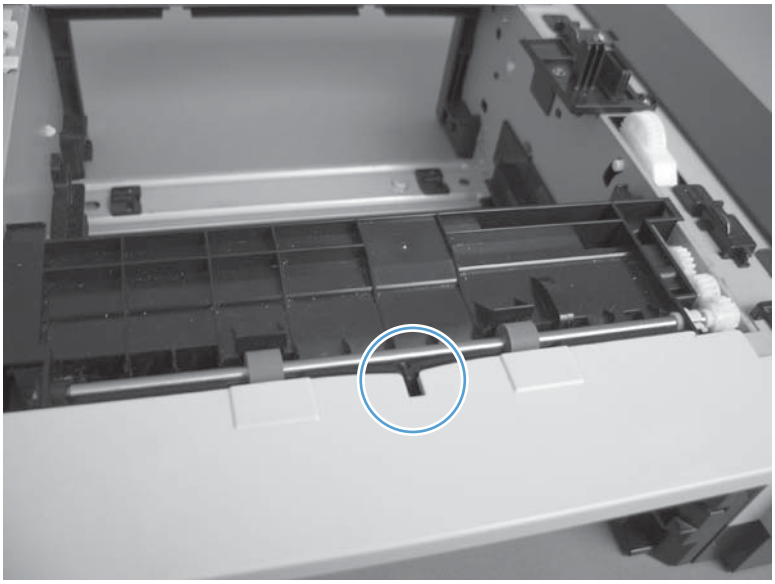
2. Check the control-panel display for sensor response.
3. If there is no response, replace the top-cover flag or the photo interrupter.

PS8008 Tray 3 Feed sensor

Test the Tray 3 feed sensor (PS8008)

1. Remove the Tray 2 cassette.
2. Use a small screwdriver to activate the sensor.

Figure 2-11 Test the Tray 3 feed sensor



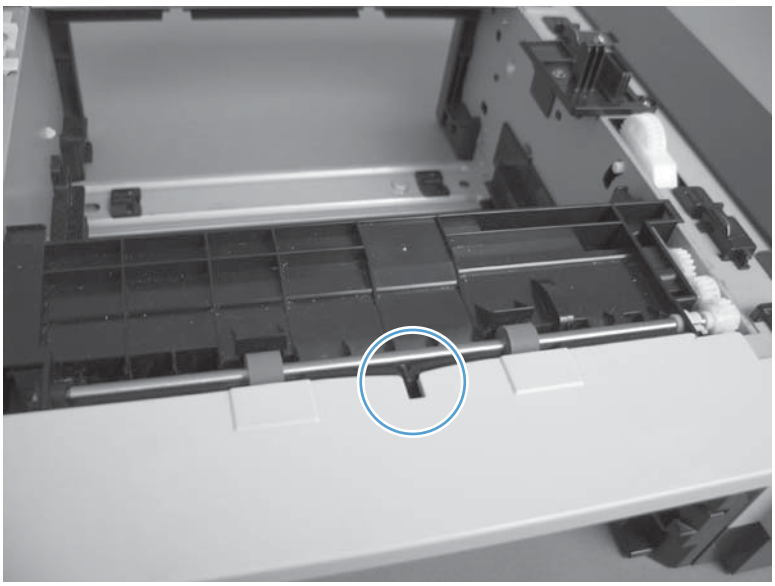
3. Check the control-panel display for sensor response.
4. If there is no response, replace the optional Tray 3 assembly.

PS8008 Tray 4 Feed sensor

Test the Tray 4 feed sensor (PS8008)

1. Remove the Tray 3 cassette.
2. Use a small screwdriver to activate the sensor.

Figure 2-12 Test the Tray 4 feed sensor



3. Check the control-panel display for sensor response.
4. If there is no response, replace the optional Tray 4 assembly.

Tray/bin manual sensor test

Use this test to test paper-path sensors and the paper-size switches manually. The following illustrations and table show the locations of these sensors.

1. From the Home screen on the product control panel, scroll to and touch the Administration button.
2. Open the following menus:
   - Troubleshooting
   - Diagnostic Tests
   - Tray/Bin Manual Sensor Test

Table 2-11 Tray/bin manual sensor test

Sensor or switch name	Sensor number	Replacement part number	Description	Paper-path sensor test name	Testing of sensor
MP tray media-presence sensor	PS205	RM1-8621-000CN	MP sensor PCA	PS205 Tray 1 Paper	Push the sensor lever to the right of the center of the tray, and hold it there for 3 seconds.
Cassette media-presence sensor	PS3	RM1-8508-000CN	Tray 2 paper pickup assembly	PS3 Tray 2 Paper	Remove the Tray 2, and then push the sensor lever.
Tray 2 cassette presence switch	SW235	RM1-8620-000CN	Tray sensor PCA	SW235 Tray 2 Cassette	Remove the Tray 2, and then reinstall it.
Paper feeder media-feed sensor - Tray 3	PS8008	CE530-69001	Tray 3 feeder unit	PS8008 Tray 3 Feed	Remove the Tray 2 cassette, use a small screwdriver to activate the sensor through the small slot toward the front of the product.
Paper feeder Tray 3 cassette media-presence sensor[1]	PS451	CE530-69001	Tray 3 feeder unit	PS451 Tray 3 Paper	Remove Tray 3, and then push the sensor lever.
Paper feeder Tray 3 cassette presence sensor[1]	PS461	CE530-69001	Tray 3 feeder unit	PS461 Tray 3 Cassette	Remove Tray 3, and then reinstall it.
Paper feeder Tray 4 cassette media-presence sensor[1]	PS451	CE530-69001	Tray 4 feeder unit	PS451 Tray 4 Paper	Remove Tray 4, and then push the sensor lever.
Paper feeder media-feed sensor - Tray 4	PS8008	(Replace feeder unit)	Tray 4 feeder unit	PS8008 Tray 4 Feed	Remove the Tray 3 cassette, use a small screwdriver to activate the sensor through the small slot toward the front of the product.

Table 2-11 Tray/bin manual sensor test (continued)

Sensor or switch name	Sensor number	Replacement part number	Description	Paper-path sensor test name	Testing of sensor
Paper feeder Tray 4 cassette presence sensor[1]	PS461	CE530-69001	Tray 4 feeder unit	PS461 Tray 4 Cassette	Remove Tray 4, and then reinstall it.
Face-down media tray media-full sensor	PS4	Photo interruptor: WG8-8519-000CN Top cover assembly: RM1-8516-000CN	Photointerrupter Top cover assembly	PS4 Output Bin Full	Open the rear door to about 15 degrees.

[1] Tray 3 and Tray 4 use PS451 and PS461 sensors.

PS205 Tray 1 Paper sensor test

Tray 1 paper sensor (PS205)

1. Push the sensor lever toward the right side of the product and hold it there for 3 seconds to activate the sensor.

Figure 2-13 Test the Tray 1 paper sensor

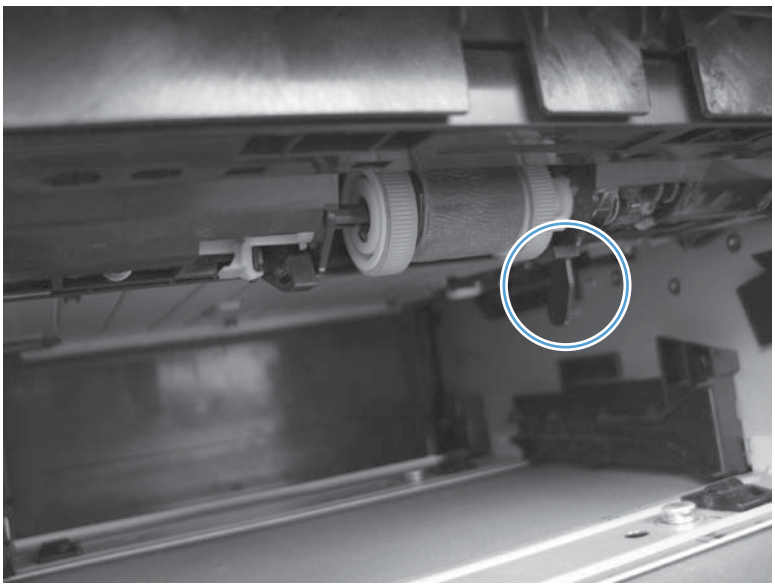
2. Check the control-panel display for sensor response.
3. If there is no response, replace the multipurpose sensor PCA (RM1-8621-000CN).

PS3 Tray 2 Paper sensor test

Tray 2 paper sensor (PS3)

1. Remove the Tray 2 cassette, and then push on the sensor levers to activate the sensor.

Figure 2-14 Test the Tray 2 paper sensor



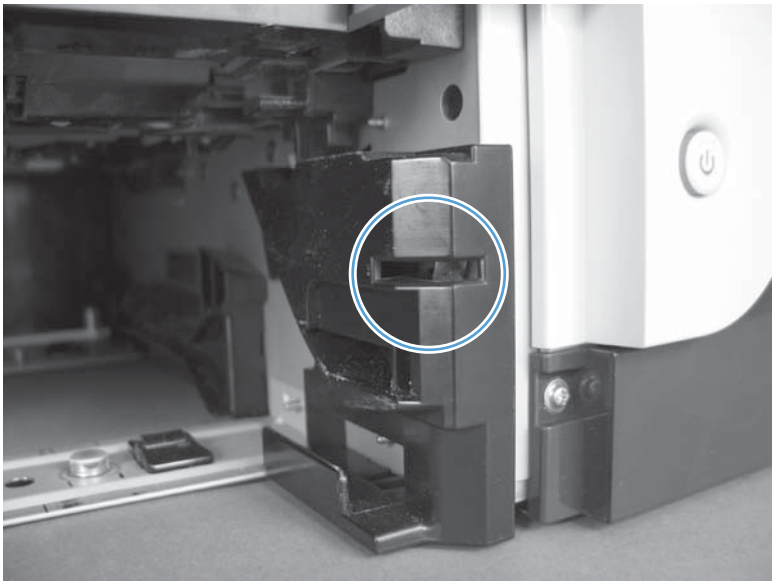
2. Check the control-panel display for sensor response.
3. If there is no response, replace the Tray 2 pickup assembly (RM1-8505-000CN).

SW235 Tray 2 Cassette sensor test

Tray 2 cassette sensor (SW235)

1. Remove the Tray 2 cassette, and then install it to activate the sensor.

   Figure 2-15 Test the Tray 2 cassette sensor

2. Check the control-panel display for sensor response.
3. If there is no response, make sure that the sensor-actuator tab on the cassette is not damaged or missing.

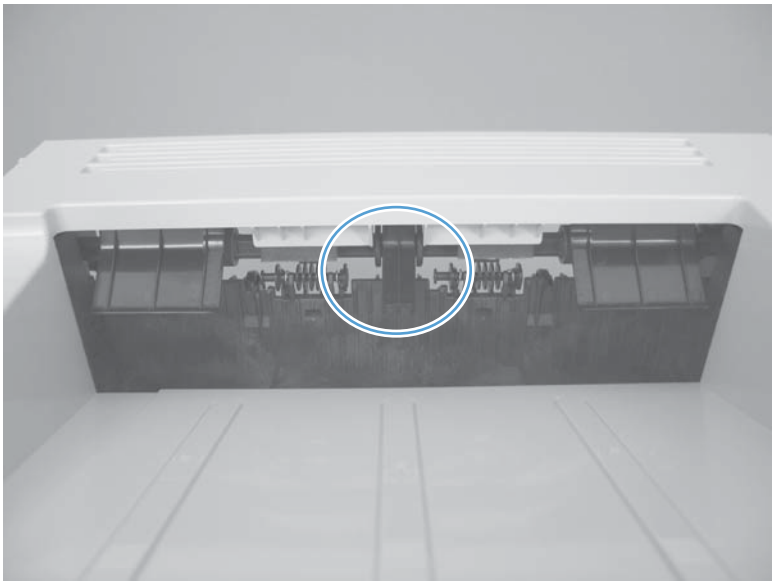
   If necessary, replace the switch.

PS4 Output bin full sensor test

Test output bin full sensor (PS1)

1. Raise and then lower the output-bin levers to activate the sensor.

Figure 2-16 Test the output bin full sensor



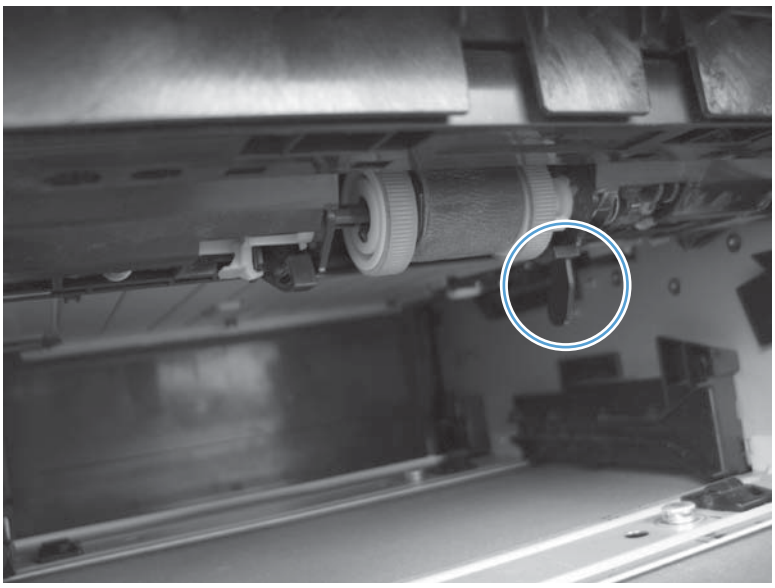
2. Check the control-panel display for sensor response.
3. If there is no response, replace the top-cover flag or the photo interrupter.

PS451 Tray 3 paper sensor test

Tray 3 paper sensor (PS451)

1. Remove the Tray 3 cassette, and then push on the sensor levers to activate the sensor.

Figure 2-17 Test the Tray 3 paper sensor



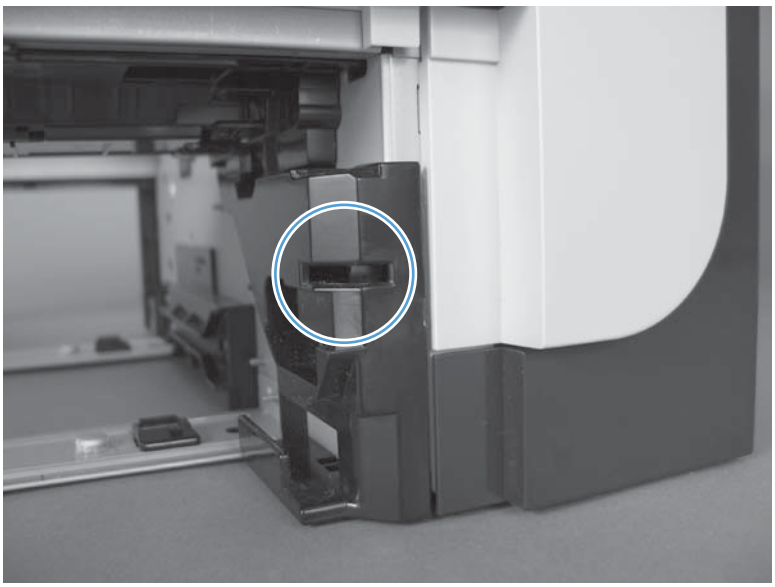
2. Check the control-panel display for sensor response.
3. If there is no response, replace the optional 500-sheet feeder.

PS461 Tray 3 cassette sensor test

Tray 3 cassette sensor (SW461)

1. Remove the Tray 3 cassette, and then install it to activate the sensor.

   Figure 2-18 Test the Tray 3 cassette sensor

2. Check the control-panel display for sensor response.
3. If there is no response, make sure that the sensor-actuator tab on the cassette is not damaged or missing.

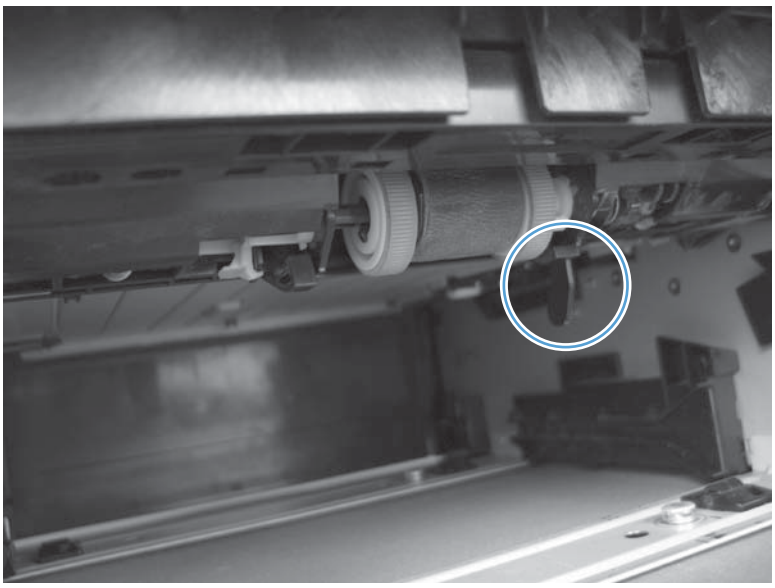
   If necessary, replace the optional 500-sheet feeder.

PS451 Tray 4 paper sensor test

Tray 4 paper sensor (PS451)

1. Remove the Tray 4 cassette, and then push on the sensor levers to activate the sensor.

Figure 2-19 Test the Tray 4 paper sensor



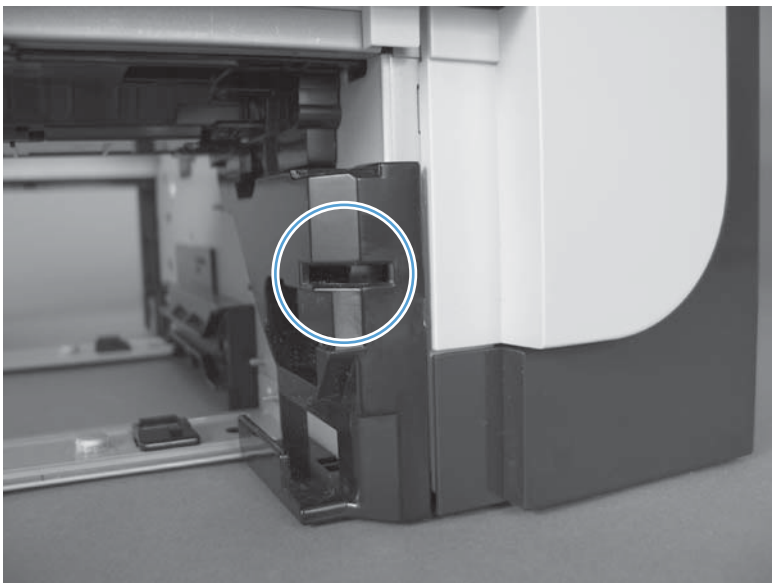
2. Check the control-panel display for sensor response.
3. If there is no response, replace the optional 500-sheet feeder.

PS461 Tray 4 cassette sensor test

Tray 4 cassette sensor (PW461)

1. Remove the Tray 4 cassette, and then install it to activate the sensor.

   Figure 2-20 Test the Tray 4 cassette sensor

2. Check the control-panel display for sensor response.
3. If there is no response, make sure that the sensor-actuator tab on the cassette is not damaged or missing.

   If necessary, replace the optional 500-sheet feeder.

Print/stop test

Use this diagnostic test to isolate the cause of problems such as image-formation defects and jams within the engine. During this test you can stop the paper anywhere along the product paper path. The test can be programmed to stop printing internal pages or an external print job when the paper reaches a certain position. The test can also be programmed to stop from 0 to 60,000 ms. If the timer is set to a value that is greater than the job-print time, you can recover the product in one of two ways.

1. From the Home screen, scroll to and touch the Administration button.
2. Touch the Troubleshooting button.
3. Touch the Diagnostic Tests button.
4. Scroll to and touch the Print/Stop Test button.
5. Enter a range, and then touch the OK button.

Table 2-12 Print/stop settings

Duration	Description
0 msecs	The leading edge of the paper stops about 10 mm (0.36 in) beyond the silver paper guide of the registration assembly.
100 msecs	The leading edge of the paper stops about 24 mm (0.94 in) beyond the silver paper guide of the registration assembly.
500 msecs	The leading edge of the paper stops prior to the paper entering the “nip” of the fuser assembly; the nip is the gap between the pressure roller and the hot fusing roller.
1000 msecs	The leading edge of the paper stops about 55 mm (2.17 in) beyond the fuser assembly output rollers.
1200 msecs	Simplex print operation: The leading edge of the paper stops 100 mm (3.94 in) past the face-down delivery stacker rollers.
1,500 msecs	Simplex print operation: The leading edge of the paper stops 5 mm (0.20 in) beyond the output-bin-full sensor flags.
2,500 msecs	Duplex print operation: The leading edge of the paper has passed through the fuser assembly and into the output stacker rollers. The paper has now reversed direction and stopped 90 mm (3.55 in) before the leading edge reaches the output-bin-full sensor flags.
3,000 msecs	Duplex print operation: The leading edge of the paper has passed through the fuser assembly and into the output stacker rollers. The paper has now reversed direction and entered the duplex accessory. The leading edge of the paper stops about 15 mm (0.59 in) after encountering the duplex media-feed sensor (PS502).

- After the print job is completed press OK button to return to the Troubleshooting menu before the timer times out.
- After the timer times out, touch the Stop button. Activate the door switch to restart the engine and return it to a normal state.

NOTE: Do not try to perform a print/stop test while the product is calibrating, because you might be required to restart the product. If a jam message displays on the control panel during testing, activate the door switch.

Component tests

Control-panel tests

Open the following menus:

- Administration
- Troubleshooting
- Diagnostic Tests

Available control-panel tests

- LEDs: test the LEDs on the control panel.
- Display: sequence through display tests.

- Buttons: tests the key pad and other buttons.
- Touchscreen: tests the control-panel touchscreen.

For more control-panel diagnostics, see Control-panel checks on page 63.

Half self-test

Perform a half self-test to determine which image-formation process might be malfunctioning.

NOTE: It might be easier to perform the print/stop test to stop the product during the printing process. See Print/stop test on page 94.

1. Print a configuration page from the control panel.
2. Open the cartridge door after the paper advances half-way through the product, which is about 3 to 5 seconds after the main motor begins to rotate. The leading edge of the paper should have advanced past the toner cartridge.
3. Remove the toner cartridge.
4. Open the toner cartridge drum shield to view the drum surface.

   If a dark and distinct toner image is present on the drum surface, assume that the cleaning, conditioning, writing, and developing functions of the electrophotographic process are functioning correctly. Troubleshoot the failure as a transfer or fusing problem. If no image is present on the drum, perform the drum rotation test check. See Drum rotation test check on page 96.

Drum rotation test check

NOTE: This test is especially important if refilled toner cartridges are in use.

The photosensitive drum, which is located in the toner cartridge, must rotate in order for the print process to work. The photosensitive drum receives its drive from the main gear assembly. Use this procedure to determine whether the drum is rotating.

1. Open the cartridge door.
2. Remove the toner cartridge.
3. Mark the cartridge drive gear with a felt-tipped marker. Note the position of the mark.
4. Install the toner cartridge, and then close the cartridge door. The start-up sequence should rotate the drum enough to move the mark on the gear.
5. Open the product and inspect the mark on the cartridge drive gear.

   Verify that the mark moved. If there was no movement, inspect the main gear assembly to make sure that it connects with the toner-cartridge gears. If the drive gears function but the drum does not move, replace the toner cartridge.

Component test (special-mode test)

This test activates individual parts independently to isolate problems.

Each component test can be performed once or repeatedly. If you turn on the Repeat option from the drop-down menu, the test cycles the component on and off. This process continues for two minutes, and then the test terminates.

1. From the Home screen on the product control panel, scroll to and touch the Administration button.
2. Open the following menus:
   - Troubleshooting
   - Diagnostic Tests
   - Component Test
3. Select the component test options for the test you want to run.

Table 2-13 Component tests

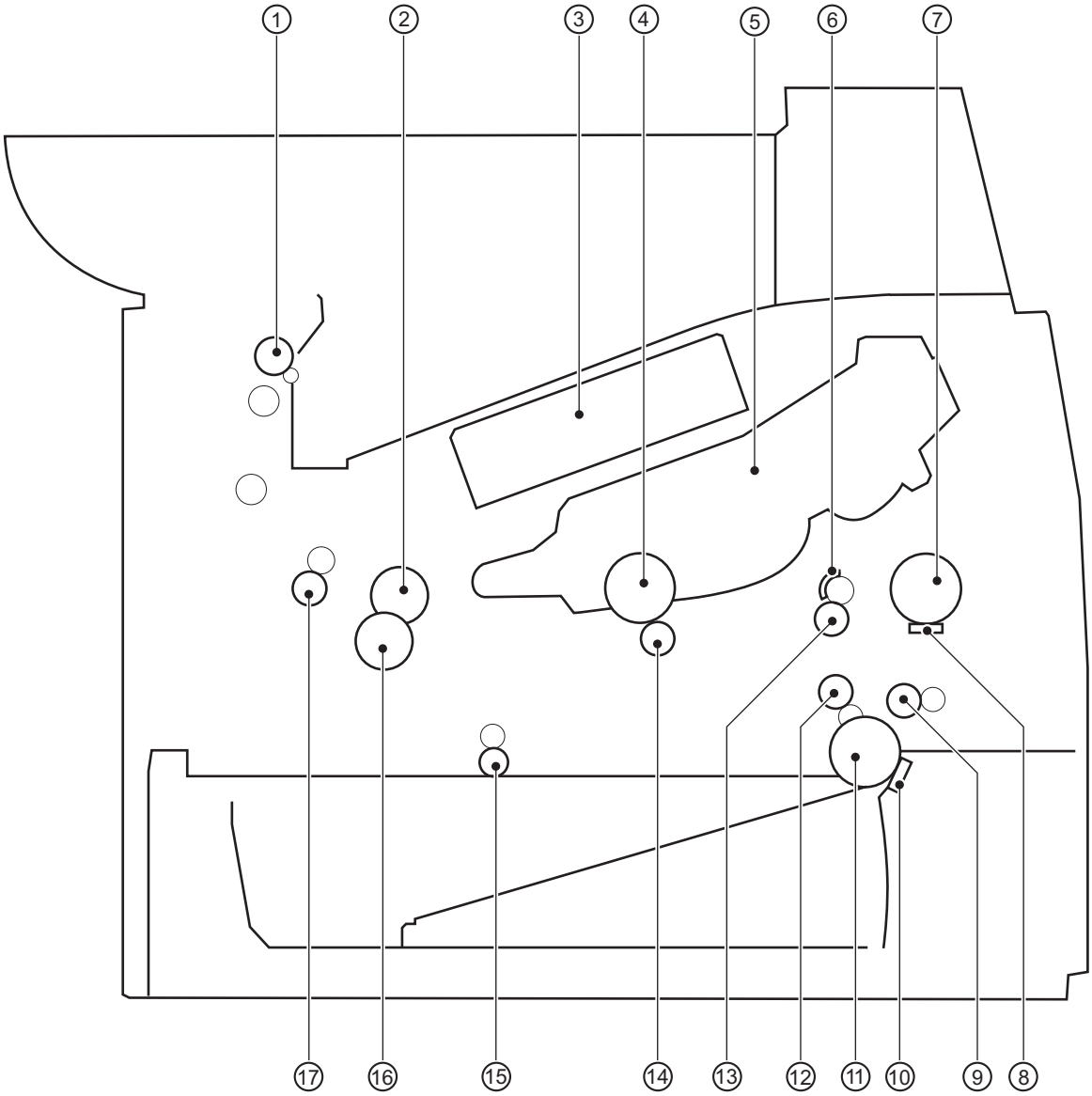
Component test	Item	Control-panel display message	Description
Main motor test	M8001	Drum Motor	Activates the main motor for 10 seconds.
Fuser motor test	M8002	Fuser Motor	Activates the fuser motor for 10 seconds.
Tray 1 (multipurpose tray) pickup solenoid test	SL1	Tray 1 Pickup Solenoid	Activates the Tray 1 pickup solenoid for 10 seconds.
Tray 2 pickup solenoid test	SL2	Tray 2 Pickup Solenoid	Activates the Tray 3 cassette pickup solenoid for 10 seconds.
Clutch drive test	CL1	Feed Roller Clutch	Activates the main motor to activate the paper feeder pickup clutch for 10 seconds.
Scanner motor test	Not applicable	Laser Scanner Motor	Activates the laser/scanner motor for 10 seconds.
Tray 3 pickup solenoid test	SL3[1]	Tray 3 Pickup Solenoid	Activates the Tray 4 cassette pickup solenoid for 10 seconds.
Tray 4 pickup solenoid test	SL3[1]	Tray 4 Pickup Solenoid	Activates the Tray 4 cassette pickup solenoid for 10 seconds.

[1] Tray 3 and Tray 4 both use a SL3.

Diagrams

Block diagrams

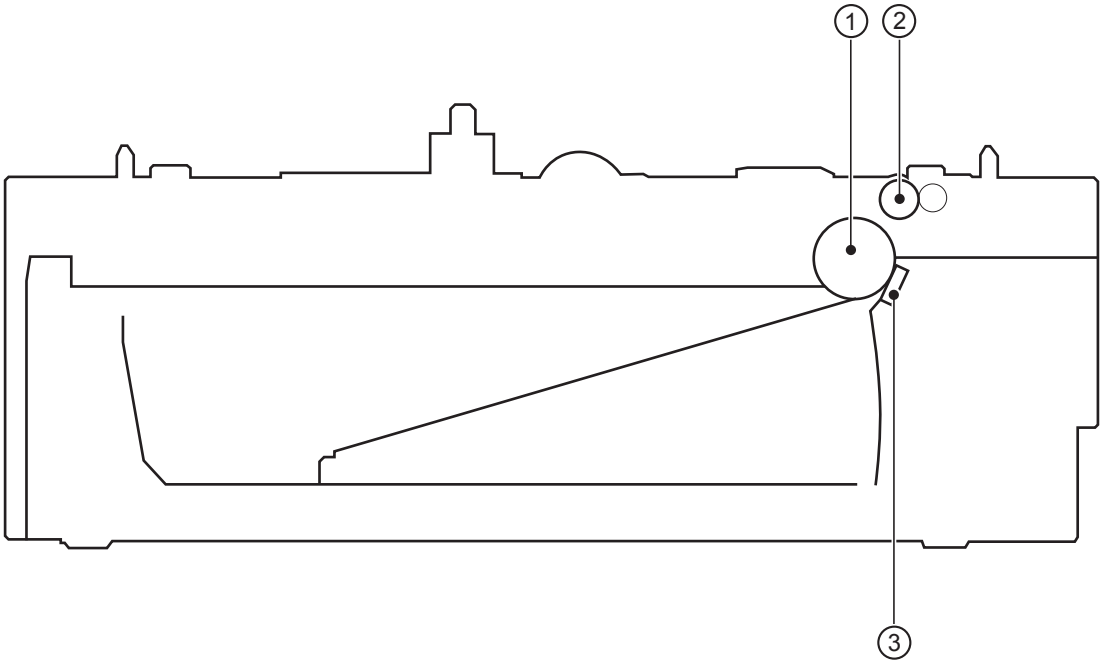
Figure 2-21 Product cross section



Item	Description	Item	Description
1	Face-down delivery roller	10	Cassette (Tray 2) separation pad
2	Fuser film	11	Cassette (Tray 2) pickup roller
3	Laser/scanner	12	Duplex repickup roller
4	Photosensitive drum	13	Registration roller
5	Toner cartridge	14	Transfer roller
6	Registration shutter	15	Duplex-feed roller (duplex models)

Item	Description	Item	Description
7	Tray 1 (multipurpose tray) pickup roller	16	Pressure roller
8	Tray 1 (multipurpose tray) separation pad	17	Fuser output roller
9	Feed roller		

Figure 2-22 Optional paper feeder (Tray 3 and Tray 4) cross section

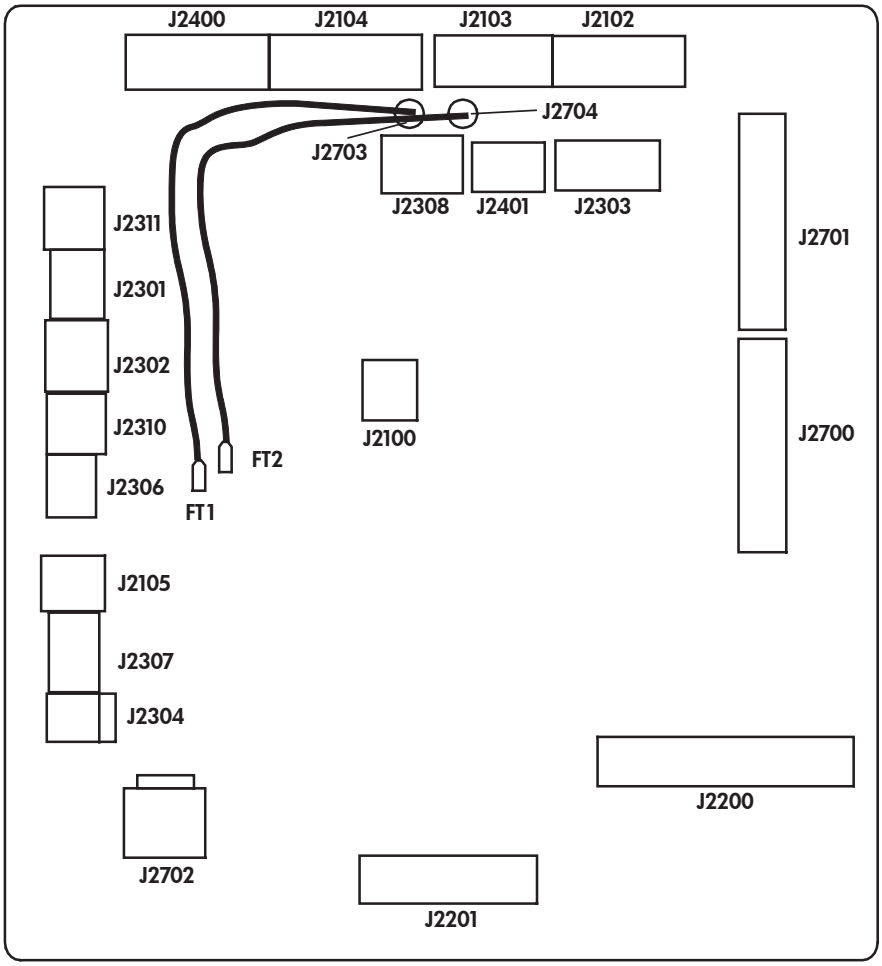


Item	Description
1	Pickup roller
2	Feed roller
3	Separation pad

Location of connectors

DC controller connections

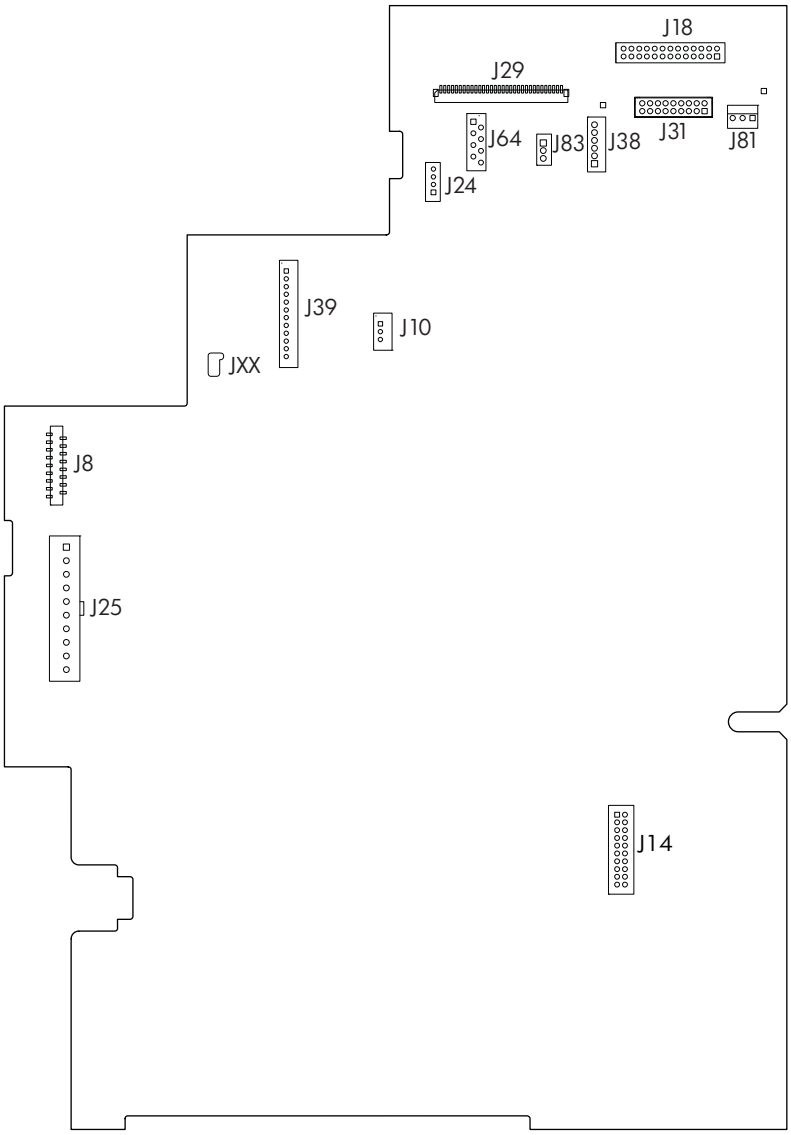
Figure 2-23 DC controller connections



Item	Description	Item	Description	Item	Description
J2100		J2302		J2400	
J2102		J2303		J2401	
J2103		J2304		J2700	
J2104		J2306		J2701	
J2105		J2307		J2702	
J2200		J2308		J2703	
J2201		J2310		J2704	
J2301		J2311			

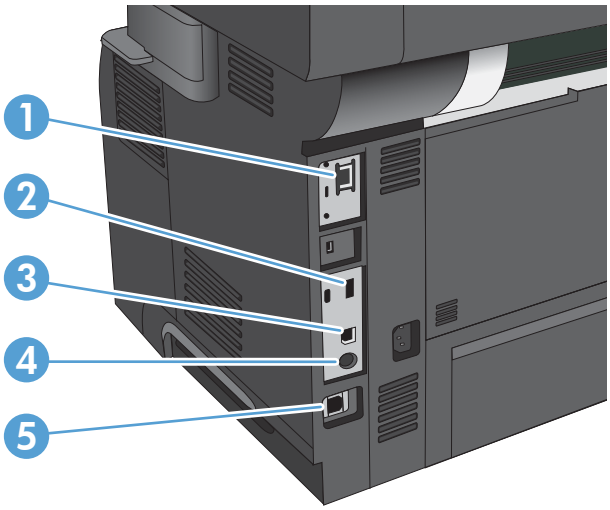
Formatter connections

Figure 2-24 Formatter connections



Item	Description	Item	Description
J8	LVPS	J31	Scanner
J10	Stapler	J38	Scanner
J14	Fax card	J39	Control panel
J18	Scanner	J64	Scanner
J24	Scanner	J81	No connection (empty)
J25	LVPS	J83	Scanner
J29	Scanner	JXX	Control panel

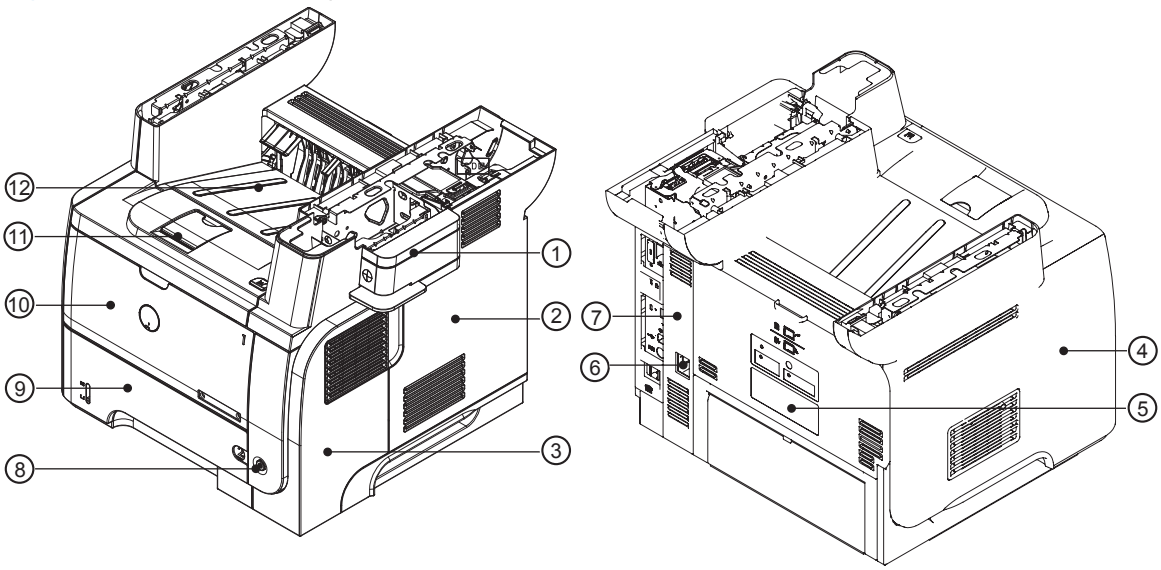
Plug/jack locations



1	Local area network (LAN) Ethernet (RJ-45) network port
2	USB port for connecting external USB devices
3	Hi-Speed USB 2.0 printing port
4	Foreign interface harness (for connecting external devices)
5	Fax port

Locations of major components

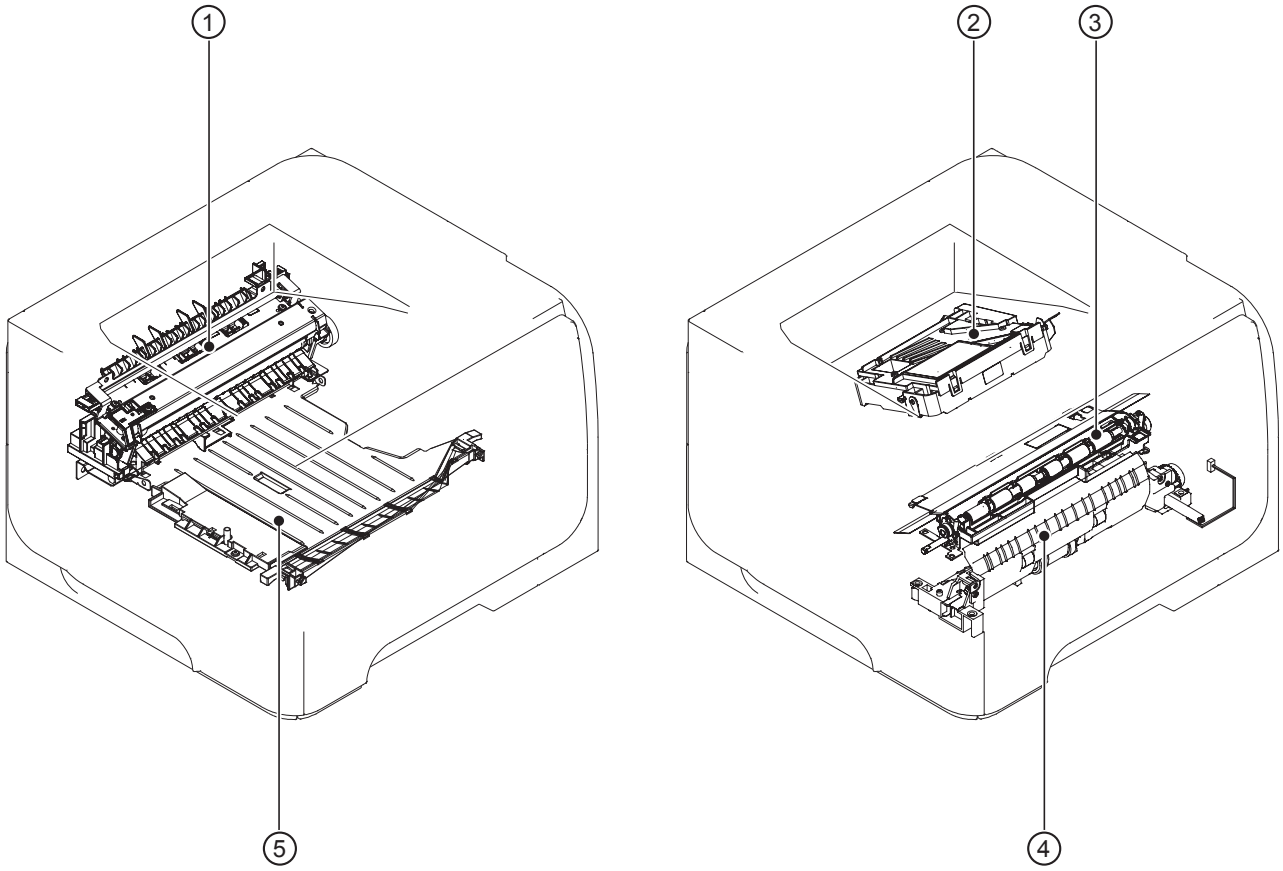
Figure 2-25 External component locations



Item	Description	Item	Description
1	Stapler cover	7	Right-rear cover

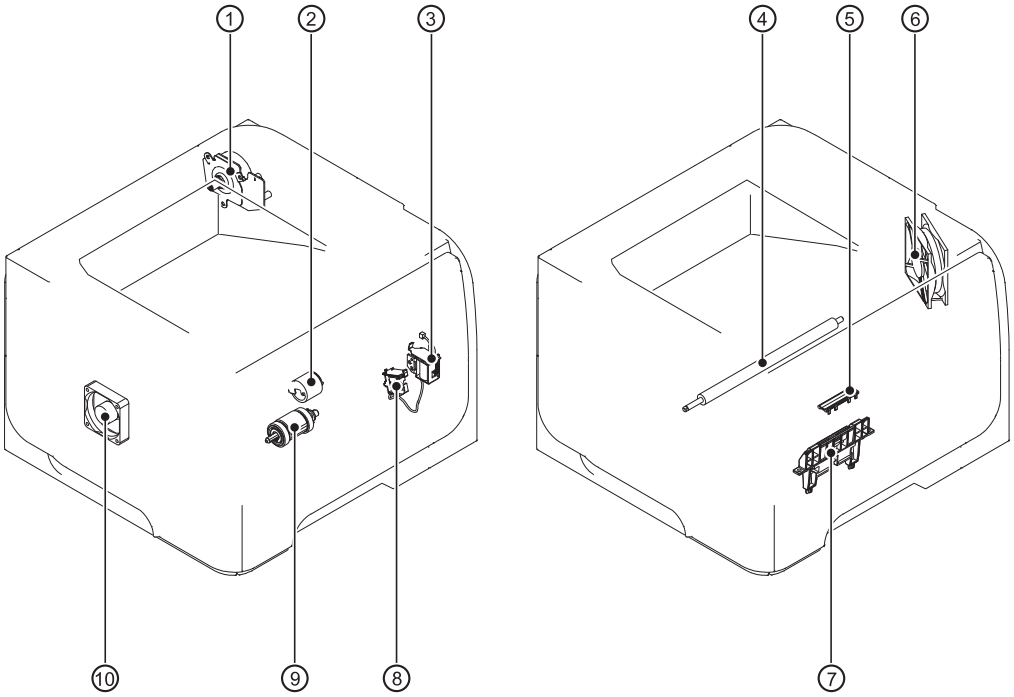
Item	Description	Item	Description
2	Formatter cover	8	Power switch
3	Right cover	9	Tray 2
4	Left cover	10	Tray 1
5	Rear door	11	Cartridge door
6	Power port	12	Face-down output bin

Figure 2-26 Major component locations



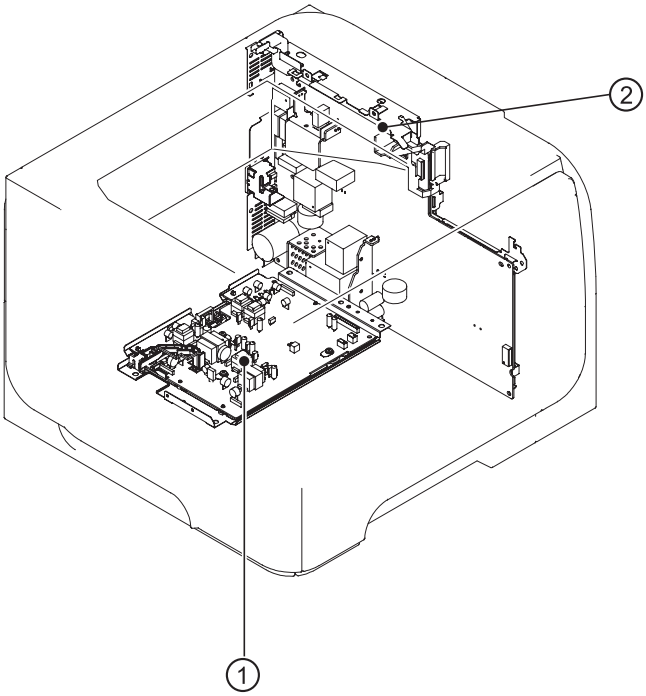
Item	Description
1	Fuser
2	Laser/scanner
3	Registration assembly
4	Pickup assembly
5	Duplex media-feed assembly

Figure 2-27 Motors, fans, solenoids, and rollers component locations



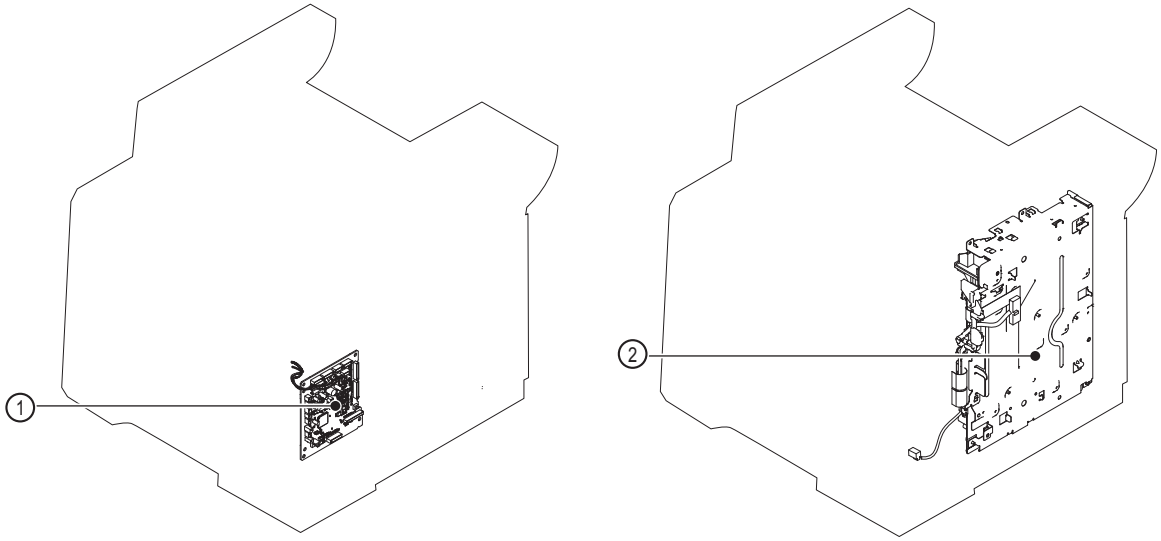
Item	Description	Item	Description
1	Fuser motor	6	Main fan
2	Tray 1 (multipurpose tray) pickup roller	7	Cassette (Tray 2) separartion pad
3	Tray 1 (multipurpose tray) pickup solenoid	8	Cassette (Tray 2) pickup solenoid
4	Transfer roller	9	Cassette (Tray 2) pickup roller
5	Tray 1 (multipurpose tray) separation pad	10	Sub fan

Figure 2-28 PCA component locations (1 of 2)



Item	Description
1	High-voltage power supply
2	Formatter

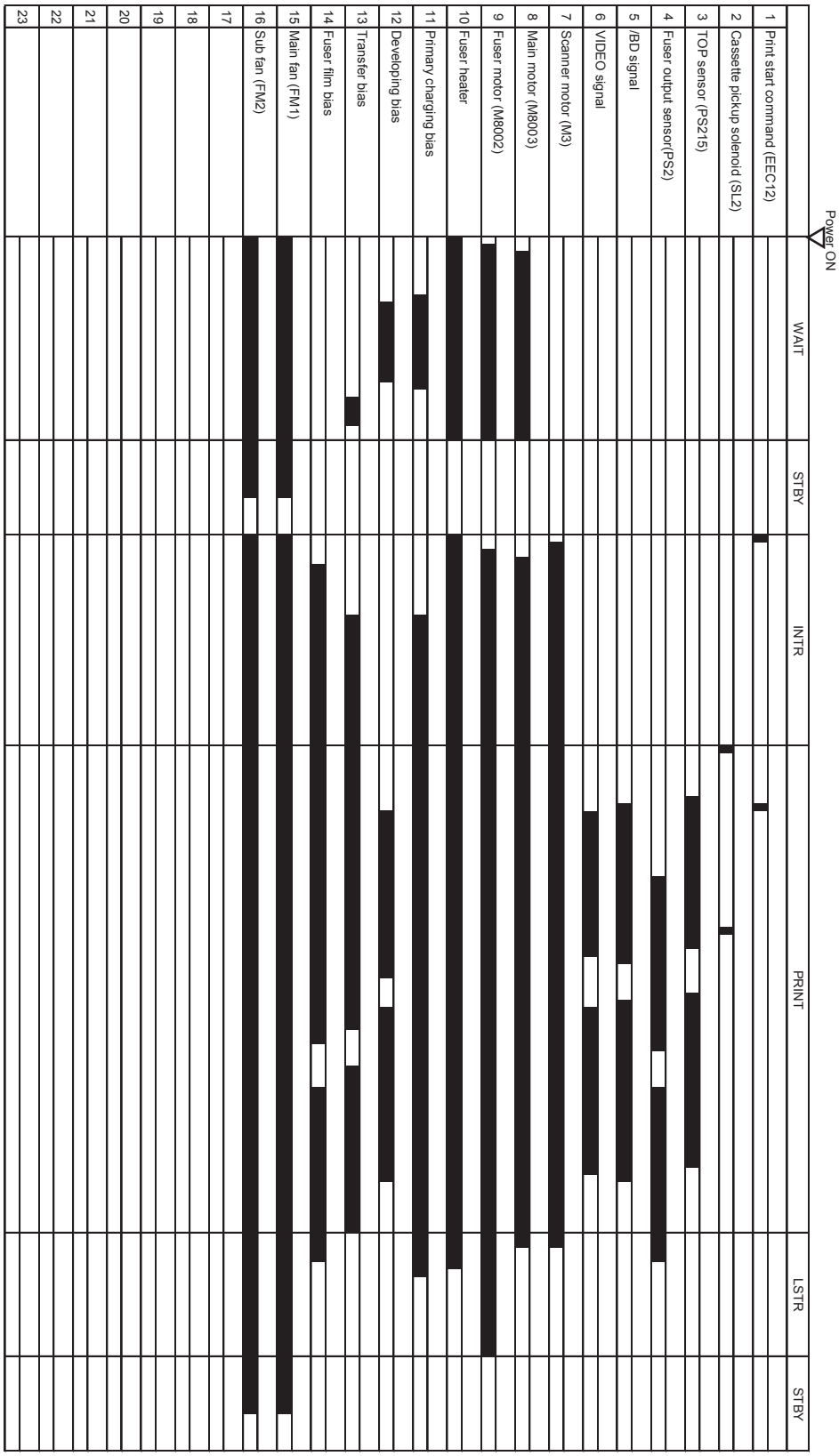
Figure 2-29 PCA component locations (2 of 2)



Item	Description
1	DC controller PCA
2	Low-voltage power supply

General timing charts

Figure 2-30 General timing chart



Circuit diagrams

Figure 2-31 General circuit diagram (1 of 2)

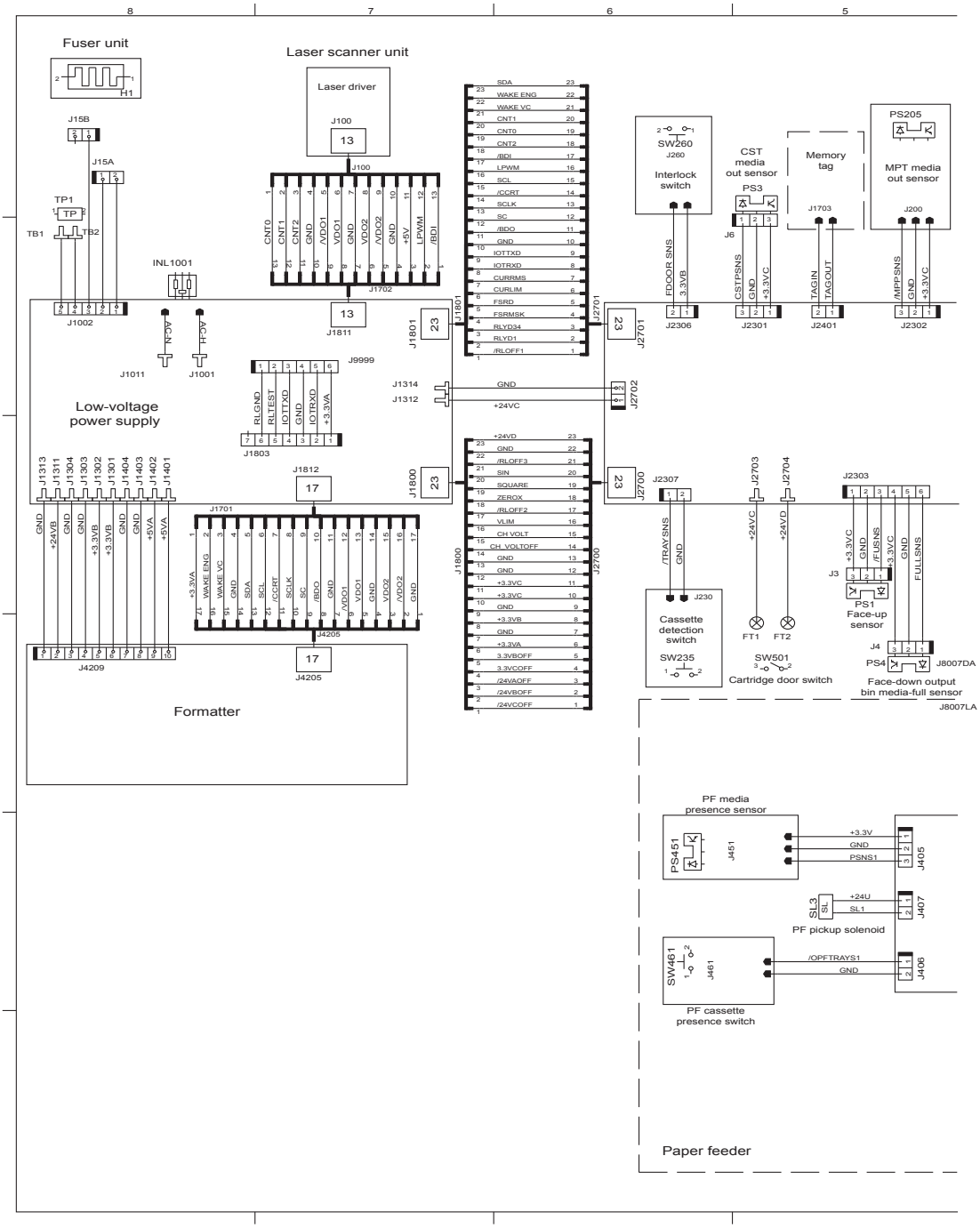
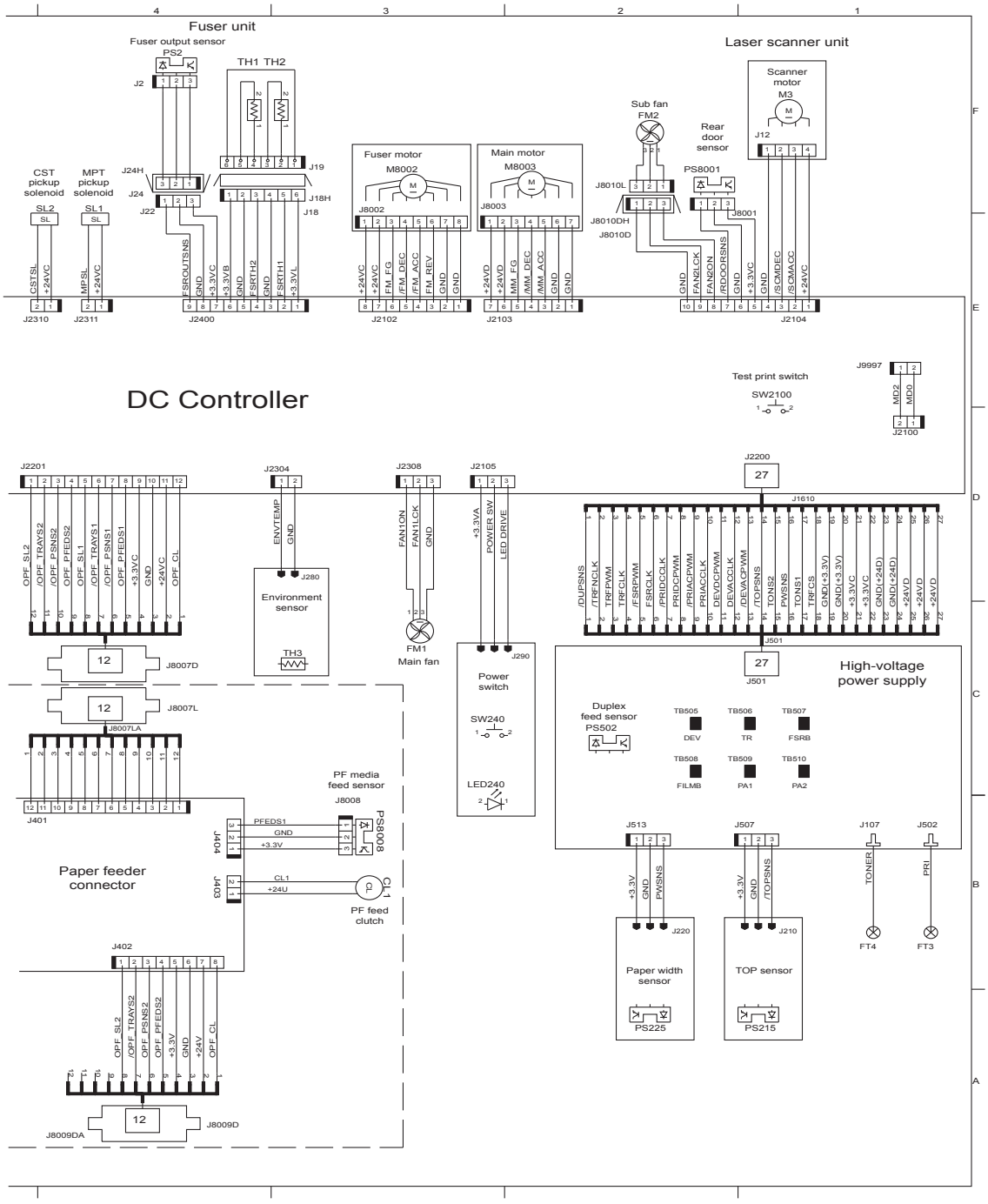


Figure 2-32 General circuit diagram (2 of 2)



Internal print-quality test pages

Clean the paper path

1. From the Home screen on the product control panel, scroll to and touch the Device Maintenance button.
2. Open the following menus:
   - Calibration/Cleaning
   - Cleaning Page
3. Touch the Print button to print the page.
4. The cleaning process can take several minutes. When it is finished, discard the printed page.

Set up an auto cleaning page

Use the procedure in this section to set up an automatic cleaning page.

1. From the Home screen on the product control panel, scroll to and touch the Device Maintenance button.
2. Open the following menus:
   - Calibration/Cleaning
   - Cleaning Settings
3. Select the Auto Cleaning item, and then select values for the Cleaning Interval option and the Cleaning Size option. Touch the OK button.

Print a configuration page

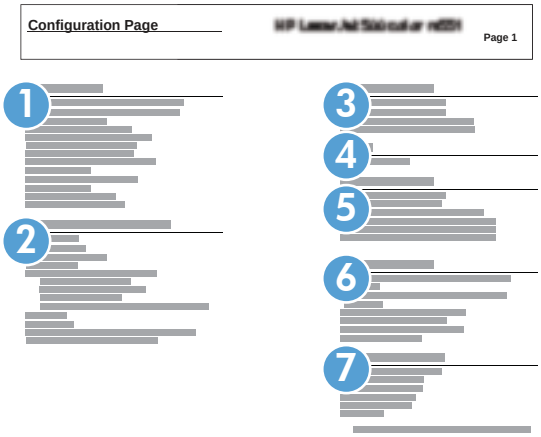
Depending on the model, up to three pages print when you print a configuration page. In addition to the main configuration page, the embedded Jetdirect configuration pages print.

Configuration page

Use the configuration page to view current product settings, to help troubleshoot product problems, or to verify installation of optional accessories, such as memory (DIMMs), paper trays, and product languages.

1. From the Home screen on the product control panel, scroll to and touch the Administration button.
2. Open the following menus:
   - Reports
   - Configuration/Status Pages
3. Touch Configuration Page to select it.
4. Touch the View button to view the information on the control panel, or touch the Print button to print the pages.

Figure 2-33 Configuration page



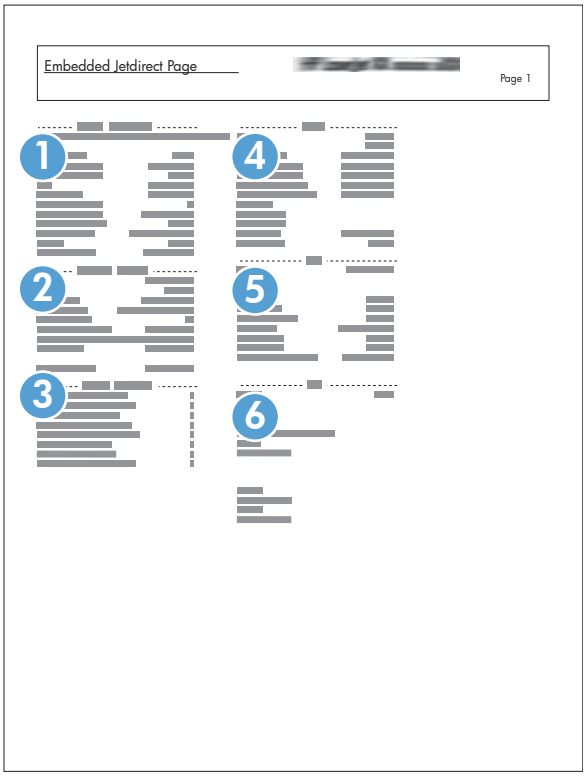
1	Device information
2	Installed personalities and options
3	HP Web services
4	Memory
5	Event log
6	Security
7	Paper trays and options

HP embedded Jetdirect page

The second configuration page is the HP embedded Jetdirect page, which contains the following information:

Always make sure the status line under the general information line indicates "I/O Card Ready."

Figure 2-34 HP embedded Jetdirect page



1	**General Information** indicates the product status, model number, hardware firmware version, port select, port configuration, auto negotiation, manufacturing identification, and manufactured date.
2	**Security Settings** information
3	**Network Statistics** indicates the total packets received, unicast packets received, bad packets received, framing errors received, total packets transmitted, unsendable packets, transmit collisions, and transmit late collisions.
4	**TCP/IP** information, including the IP address
5	**IPv4** information
6	**IPv6** information

Finding important information on the configuration pages

Certain information, such as the firmware date codes, the IP address, and the e-mail gateways, is especially helpful while servicing the product. This information is on the various configuration pages.

Table 2-14 Important information on the configuration pages

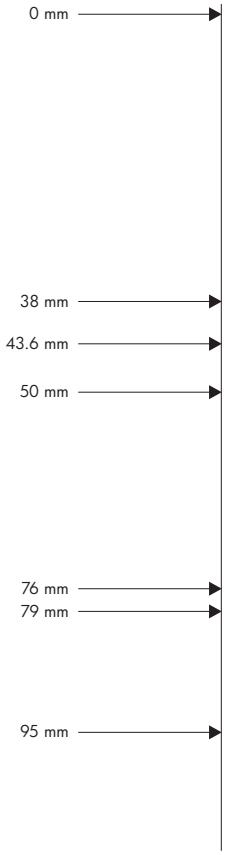
Type of information	Specific information	Configuration page
Firmware date codes When you use the remote firmware upgrade procedure, all of these firmware components are upgraded.	DC controller	Look on the main configuration page, under "Device Information."
	Firmware datecode	Look on the main configuration page, under "Device Information."
	Embedded Jetdirect firmware version	Look on the embedded Jetdirect page, under "General Information."
Accessories and internal storage All optional devices that are installed on the product should be listed on the main configuration page. In addition, separate pages print for the optional paper handling devices and the fax accessory. These pages list more-detailed information for those devices.	External disk (optional)	Look on the main configuration page, under "Installed Personalities and Options." Shows model and capacity.
	Embedded HP Jetdirect	Look on the main configuration page, under "Installed Personalities and Options." Shows model and ID.
	Total RAM	Look on the main configuration page, under "Memory."
	Duplex unit	Look on the main configuration page, under "Paper Trays and Options."
Additional 500-sheet feeders	Additional 500-sheet feeders	Look on the main configuration page, under "Paper Trays and Options."
Engine cycles and event logs Total page counts and maintenance kit counts are important for ongoing product maintenance. The configuration page lists only the three most recent errors. To see a list of the 50 most recent errors, print an event log from the Diagnostics menu.	Engine cycles	Look on the main configuration page, under "Device Information."
Event-log information	Event-log information	Look on the main configuration page, under "Event log."

Print quality troubleshooting tools

Repetitive defects ruler

Use a ruler to measure occurrences of repetitive image defects to help solve image quality problems. Place the ruler next to the first occurrence of the defect on the page. Find the distance between identical defects and use the figure below to identify the component that is causing the defect.

NOTE: When printing this defect ruler, verify that any scaling options in the print driver are disabled.



Distance between defects	Product components that cause the defect
38 mm	Toner cartridge (primary charging roller)
43.6 mm	Print engine (transfer roller)
50 mm	Toner cartridge (developer roller)
76 mm	Fuser (fuser film)
79 mm	Fuser (pressure roller)
95 mm	Toner cartridge (OPC)

Control panel menus

Administration menu

You can perform basic product setup by using the Administration menu. Use the HP Embedded Web Server for more advanced product setup. To open the HP Embedded Web Server, enter the product IP address or host name in the address bar of a Web browser.

Reports menu

To display: At the product control panel, select the Administration menu, and then select the Reports menu.

Table 2-15 Reports menu

First level	Second level	Values	Description
Configuration/Status Pages	Administration Menu Map	Print View	Shows a map of the entire Administration menu and the selected values for each setting.
	Current Settings Page	Print View	Print a summary of the current settings for the product. This might be helpful if you plan to make changes and need a record of the present configuration.
	Configuration Page	Print View	Shows the product settings and installed accessories.
	Supplies Status Page	Print View	Shows the approximate remaining life for the supplies; reports statistics on total number of pages and jobs processed, serial number, page counts, and maintenance information. HP provides approximations of the remaining life for the supplies as a customer convenience. The actual remaining supply levels might be different than the approximations provided.
	Usage Page	Print View	Shows a count of all paper sizes that have passed through the product; lists whether they were simplex, duplex, monochrome, or color; and reports the page count.
	File Directory Page	Print View	Shows the file name and folder name for files that are stored in the product memory.

Table 2-15 Reports menu (continued)

First level	Second level	Values	Description
	Web Services Status Page	Print View	Shows the detected Web Services for the product.
Fax Reports	Fax Activity Log	Print View	Contains a list of the faxes that have been sent from or received by this product.
	Billing Codes Report	Print View	Provides a list of billing codes that have been used for outgoing faxes. This report shows how many sent faxes were billed to each code.
	Blocked Fax List	Print View	A list of phone numbers that are blocked from sending faxes to this product.
	Speed Dial List	Print View	Shows the speed dials that have been set up for this product.
	Fax Call Report	Print View	A detailed report of the last fax operation, either sent or received.
Other Pages	PCL Font List	Print	Prints the available PCL fonts.
	PS Font List	Print	Prints the available PS fonts.

General Settings menu

To display: At the product control panel, select the Administration menu, and then select the General Settings menu.

In the following table, asterisks (*) indicate the factory default setting.

Table 2-16 General Settings menu

First level	Second level	Third level	Fourth level	Values	Description
Date/Time Settings	Date/Time Format	Date Format		DD/MMM/YYYY MMM/DD/YYYY YYYY/MMM/DD	Use the Date/Time Settings menu to specify the date and time and to configure date/time settings.
		Time Format		12 hour (AM/PM) 24 hours	Select the format that the product uses to show the date and time, for example 12-hour format or 24-hour format.
	Date/Time	Time Zone		Select the time zone from a list.	

Table 2-16 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Date		Select the date from a pop-up calendar.	
		Time		Select the time from a pop-up keypad.	
		Adjust for Daylight Savings		Checkbox	If you are in an area that uses daylight savings time, select the Adjust for Daylight Savings box.
Energy Settings	Sleep Schedule	A list of scheduled events displays.		+ (Add) Edit Delete	Use to configure the product to automatically wake up or go to sleep at specific times on specific days. Using this feature saves energy. **NOTE:** You must configure the date and time settings before you can use the Sleep Schedule feature.
			Event Type	Wake Sleep	Select whether to add or edit a Wake event or a Sleep event, and then select the time and the days for the wake or sleep event.
			Event Time		
			Event Days	Select days of the week from a list.	
	Sleep Timer Settings	Sleep Mode/Auto Off After		Range: 1 to 120 minutes Default = 60 minutes	Set the number of minutes after which the product enters Sleep or Auto Off mode. Use the arrow buttons on the control panel to increase or decrease the number of minutes.
	Wake/Auto On to These Events			All Events* Network port Power button only	

Table 2-16 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Print Quality	Image Registration	Adjust Tray <X>	Print Test Page		Shift the margin alignment to center the image on the page from top to bottom and from left to right. You can also align the image on the front with the image printed on the back. Use the Adjust Tray <X> menu to adjust the registration settings for each tray. Before adjusting these values, print a registration test page. It provides alignment guides in the X and Y directions so you can determine which adjustments are necessary. You can adjust values for X1 Shift, X2 Shift, Y1 Shift, and Y2 Shift. Use the Print Test Page option to print a page to test the image registration. It provides alignment guides in the X and Y directions so you can determine which adjustments are necessary.

Table 2-16 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			X1 Shift Y1 Shift X2 Shift Y2 Shift	-5.00 mm to 5.00 mm	The direction that is perpendicular to the way the paper passes through the product is referred to as X. This is also known as the scan direction. X1 is the scan direction for a single-sided page or for the second side of a two-sided page. X2 is the scan direction for the first side of a two-sided page. The direction that the paper feeds through the product is referred to as Y. Y1 is the feed direction for a single-sided page or for the second side of a two-sided page. Y2 is the feed direction for the first side of a two-sided page.
	Adjust Paper Types	Select from a list of paper types that the product supports. The available options are the same for each paper type.	Print Mode	Select from a list of print modes.	Changing the Print Mode setting is usually the first thing to try to resolve print-quality problems. Problems can include toner not sticking well to the page, a faint image of the page repeated on the same or following page, incorrect gloss level, etc.

Table 2-16 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			Resistance Mode	Normal Up Down	Use this setting to correct print quality problems in low-humidity environments and highly resistive paper. Use the Up option to solve print quality problems that are related to poor toner-transfer. Use the Down option in the event that small, "pin-hole" defects occur.
			Humidity Mode	Normal Alternate 1 Alternate 2 Alternate 3	
			Line Detail	Normal Alternate 1 Off	
	Optimize	Environment		Normal* Low Temp	Enable if the product is operating in a low temperature environment and you are having problems with print quality such as blisters in the printed image.
		Restore Optimize			Use to return all the settings in the Optimize menu to the factory-default values.
	Resolution			300 x 300 dpi 600 x 600 dpi FastRes 1200 ProRes	Sets the resolution at which the product prints.
	REt				On Off

Table 2-16 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Economode				On Off
	Toner density			Default	Lighter print Darker print
Jam Recovery				Auto* Off On	This product provides a jam recovery feature that reprints jammed pages. Select one of the following options: Auto: The product attempts to reprint jammed pages when sufficient memory is available. This is the default setting. Off: The product does not attempt to reprint jammed pages. Because no memory is used to store the most recent pages, performance is optimal. **NOTE:** When using this option, if the product runs out of paper and the job is being printed on both sides, some pages can be lost. On: The product always reprints jammed pages. Additional memory is allocated to store the last few pages printed. This might cause overall performance to suffer.
Auto Recovery				Enabled Disabled*	The product attempts to reprint jammed pages when sufficient memory is available. This is the default setting.

Table 2-16 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Manage Stored Jobs	Sort Stored Jobs By			Job Name* Date	This option allows you list the jobs either Alphabetically or Chronologically.
	Quick Copy Job Held Timeout			Off* 1 Hour 4 Hours 1 Day 1 Week	Sets a maximum storage-time limit for stored Quick Copy and Proof and Hold jobs. If a stored job is not printed during this period, it is deleted.
	Quick Copy Job Storage Limit			1-100 Default = 32	Configure global settings for jobs that are stored in the product memory. The Quick Copy Job Storage Limit feature specifies the number of Quick Copy and Proof and Hold jobs that can be stored on the product. The maximum allowed value is 100.
	Default Folder Name				Type the name for the stored jobs folder that is accessible to all users.
Enable Retrieve from USB				Enabled Disabled*	Enables the product to open a file from a USB device.

Table 2-16 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Hold Off Print Job				Enabled* Disabled	Enable this feature if you want to prevent print jobs from starting while a user is initiating a copy job from the control panel. Held print jobs start printing after the copy job is finished, provided that no other copy job is in the print queue.
Restore Factory Settings				Address Book Copy Digital Send E-mail Fax General Print Security	Use to restore all product settings to their factory defaults.

Copy Settings menu

To display: At the product control panel, select the Administration menu, and then select the Copy Settings menu.

In the following table, asterisks (*) indicate the factory default setting.

Table 2-17 Copy Settings menu

First level	Second level	Third level	Values	Description
Copies			1–9999 Default = 1	Configure the default options for copy jobs. If the user does not specify the job options when creating the job, the default options are used.

Table 2-17 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
Sides			1-sided original, 1-sided output* 2-sided original, 2-sided output 1-sided original, 2-sided output 2-sided original, 1-sided output	Use to indicate whether the original document is printed on one or both sides, and whether the copies should be printed on one or both sides. For example, select 1-sided original, 2- sided output when the original is printed on one side, but you want to make two-sided copies.
	Orientation	Portrait*		Specify portrait or landscape orientation and select the way the second sides are printed. Portrait orientation means the short edge of the page is along the top.
		Landscape		Landscape orientation means the long edge of the page is along the top.

Table 2-17 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
		2-Sided Format	Book-style Flip-style Book-style original; Flip-style copy Flip-style original; Book-style copy	If you are making two-sided copies, select a 2-sided format option. Book-style: The back side of the original is printed right-side-up, and the back side of the copy is printed the same way. Use this option for originals and copies that are bound along the left edge. Flip-style: The back side of the original is printed upside-down, and the back side of the copy is printed the same way. Use this option for originals and copies that are to be bound along the top edge. Book-style original; Flip-style copy: The back side of the original is printed right-side-up, but the back side of the copy is printed upside-down. Use this option when the original is bound along the left edge, but you want the copies to be bound along the top edge. Flip-style original; Book-style copy: The back side of the original is printed upside-down, but the back side of the copy is printed right-side-up. Use this option when the original is bound along the top edge, but you want the copies to be bound along the left edge.

Table 2-17 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
Collate			Collate on (Sets in page order)* Collate off (Pages grouped)	If you are making more than one copy, select the Collate on (Sets in page order) option to assemble the pages in the correct order in each set of copies. Select the Collate off (Pages grouped) option to group the same pages together. For example, if you are making five copies of an original document that has two pages, all five first pages would be grouped together and all five second pages would be grouped together.
Reduce/Enlarge	Scaling		Auto* 100% 75% 50% 125% 150% 200% Range X-Y (25-400%)	Use to scale the size of the document up or down. Select one of the predefined percentages, or select the Scaling field and type a percentage between 25 and 400. TheAuto option automatically scales the image to fit the paper size in the tray. **NOTE:** To reduce the image, select a scaling percentage that is less than 100. To enlarge the image, select a scaling percentage that is greater than 100.
	Auto Include Margins			The product reduces the image slightly to fit the entire scanned image within the printable area on the page.
Paper Selection			Manually feed Automatic Tray 1: [Type], [Size] Tray <X>: [Type], [Size]	For the best color and image quality, select the appropriate paper type from the control panel menu or from the print driver.

Table 2-17 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
Image Adjustment	Darkness		Select a value using the slide bar, or touch Automatic.	Use to improve the overall quality of the copy. Adjust the Darkness setting to increase or decrease the amount of white and black in the colors.
	Contrast		Select a value using the slide bar, or touch Automatic.	Adjust the Contrast setting to increase or decrease the difference between the lightest and darkest color on the page.
	Background Cleanup		Select a value using the slide bar, or touch Automatic.	Adjust the Background Cleanup setting if you are having trouble copying a faint image.
	Sharpness		Select a value using the slide bar, or touch Automatic.	Adjust the Sharpness setting to clarify or soften the image. For example, increasing the sharpness could make text appear crisper, but decreasing it could make photographs appear smoother.
	Default			Select this to make the selected Image Adjustment setting the default value.
Content Orientation	Orientation		Portrait* Landscape	For some features to work correctly, you must specify the way the content of the original document is placed on the page. Portrait orientation means the short edge of the page is along the top. Landscape orientation means the long edge of the page is along the top.

Table 2-17 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
	2-Sided Format		Book-style Flip-style Book-style original; Flip-style copy Flip-style original; Book-style copy	If you are making two-sided copies, select a 2-sided format option. Book-style: The back side of the original is printed right-side-up, and the back side of the copy is printed the same way. Use this option for originals and copies that are bound along the left edge. Flip-style: The back side of the original is printed upside-down, and the back side of the copy is printed the same way. Use this option for originals and copies that are to be bound along the top edge. Book-style original; Flip-style copy: The back side of the original is printed right-side-up, but the back side of the copy is printed upside-down. Use this option when the original is bound along the left edge, but you want the copies to be bound along the top edge. Flip-style original; Book-style copy: The back side of the original is printed upside-down, but the back side of the copy is printed right-side-up. Use this option when the original is bound along the top edge, but you want the copies to be bound along the left edge.
Output Bin				Automatic Standard bin (correct order) Rear bin (straightest path)

Table 2-17 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
Optimize Text/Picture	Manually adjust*		Optimize For slider	Use this setting to optimize the output for a particular type of content.
			Text Printed picture Photograph	Manually adjust: Use to manually optimize the setting for each document. Printed picture: Use for line drawings and preprinted images, such as magazine clippings or pages from books. If you see bands of irregular color or intensity on copies, try selecting the Printed picture setting to improve the quality. Photograph: Use for photographic prints.
Pages per Sheet			One (1) Two (2) Four (4)	Copies multiple pages onto one sheet of paper. **NOTE:** Before using this screen, use the Content Orientation screen to describe the original document orientation.
	Page Order		Right, then down Down, then right	If you are printing four pages per sheet, select the page order. To print the pages in rows, select the Right, then down option. To print the pages in columns, select the Down, then right option.
	Add Page Borders			If you are printing two or more pages per sheet and you want to print a border around each page, select the Add Page Borders option.
Original Size			Select from a list of sizes that the product supports.	Describes the page size of the original document.

Table 2-17 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
Booklet Format	Booklet		Booklet off Booklet on	Use to copy two or more pages onto one sheet of paper so you can fold the sheets in the center to form a booklet. The product arranges the pages in the correct order. For example, if the original document has eight pages, the product prints pages 1 and 8 on the same sheet.
	Original Sides		1-sided 2-sided	Select the 1-sided option if the original document is printed on only one side. Select the 2-sided option if the original document is printed on two sides.
	Borders on Each Page			To print a border around each page, select the Borders on Each Page option.
Edge-to-Edge			Normal (recommended)* Edge-to-Edge output	Use to avoid shadows that can appear along the edges of copies when the original document is printed close to the edges. Combine with the Reduce/Enlarge feature to ensure that the entire page is printed on the copies. When the Edge-to-Edge feature is turned on, the product minimizes margins and prints as close to the edge of the paper as possible.
Job Build			Job Build off* Job Build on	Use to combine several original documents into one job. Also use this feature to scan an original document that has more pages than the document feeder can accommodate at one time. The product temporarily saves all the scanned images. After you have scanned all the pages for the job, touch the Finish option to finish the job.

Scan/Digital Send Settings menu

To display: At the product control panel, select the Administration menu, and then select the Scan/Digital Send Settings menu.

In the following table, asterisks (*) indicate the factory default setting.

Table 2-18 Scan/Digital Send Settings menu

First level	Second level	Third level	Fourth level	Values	Description
E-mail Settings Default Save to Network Folder Options Default Save to USB Options **NOTE:** The same options are available for each of these features, except where noted.	E-mail Setup **NOTE:** Email Settings only	E-mail Setup Wizard			Use to configure settings that apply to sending documents through email or saving documents to a folder on the network or on a USB flash drive. The E-mail Setup Wizard feature configures the product to send scanned images as email attachments. To open the product HP Embedded Web Server and set up the email notification server, enter the product network address into a Web browser.

Table 2-18 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Default Job Options	Image Preview		Make optional* Require preview Disable preview	Defines the default job options for each function. If you do not specify the job options when creating the job, the default options are used. For complete setup, go to the HP Embedded Web Server by typing the network address of the product into a Web browser. Use the Image Preview feature to scan a document and display a preview before completing the job. Select whether this feature is available on the product. Make optional: The feature is optional, depending on the user who is signed in. Require preview Previews are required for all users. Disable preview: Previews are disabled for all users.

Table 2-18 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Default File Name			The product is shipped with a factory default file name of [Untitled] for any scanned files that are sent or saved. Use this feature to specify a different default file name. If you are saving a file to a network folder or USB storage product and a file with the default file name already exists, a number is appended to the file name, for example, [Untitled]001.

Table 2-18 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Document File Type		Select from a list of file types.	PDF provides the best overall image and text quality. JPEG is a good choice for most graphics. Most computers have a browser that can view .JPEG files. This file type produces one file per page. TIFF is a standard file format that many graphics programs support. This file type produces one file per page. MTIFF stands for multi-page TIFF. This file type saves multiple scanned pages in a single file. XPS (XML Paper Specification) creates an XAML file that preserves the original formatting of the document and supports color graphics and embedded fonts. **NOTE:** OCR file types are not supported on this product unless attached to DSS.

Table 2-18 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Optimize Text/ Picture		Manually adjust* Text Printed picture Photograph	Use to optimize the output for a particular type of content. You can optimize the output for text, printed pictures, or a mixture. Manually adjust: Use to manually optimize the setting for text or for pictures. Text: Use to optimize the text portion of the copy where text and/or pictures are on the original. Printed picture: Use for line drawings and preprinted images, such as magazine clippings or pages from books. Photograph: Best suited for making copies of printed pictures.
		Output Quality		High (large file) Medium* Low (small file)	Use to select the quality for the output. Higher-quality images require a larger file size than lower-quality images. Larger files take more time to send, and some recipients might have trouble receiving larger files.

Table 2-18 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Original Sides		1-sided 2-sided	Use to describe the layout for each side of the original document. First select whether the original document is printed on one side or both sides. Then touch the Orientation setting to indicate whether the original has portrait or landscape orientation. If it is printed on both sides, also select the 2-sided format that matches the original document.
			Orientation	Automatically detect Portrait* Landscape	For some features to work correctly, you must specify the way the content of the original document is placed on the page. Portrait orientation means the short edge of the page is along the top. Landscape orientation means the long edge of the page is along the top. In the Orientation area, select whether the original document has a portrait or landscape orientation.

Table 2-18 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			2-Sided Format	Book-style Flip-style	Book-style: The back side of the original is printed right-side-up, and the back side of the copy is printed the same way. Use this option for originals and copies that are bound along the left edge. Flip-style: The back side of the original is printed upside-down, and the back side of the copy is printed the same way. Use this option for originals and copies that are to be bound along the top edge.
		Resolution		400 dpi 300 dpi 200 dpi 150 dpi* 75 dpi	Sets the resolution for sent documents. Higher resolution images have more dots per inch (dpi), so they show more detail. Lower resolution images have fewer dots per inch and show less detail, but the file size is smaller. Some file types, for example a file that will be processed with OCR, require a specific resolution. When these file types are selected, the Resolution setting might automatically change to a valid value.

Table 2-18 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Content Orientation	Orientation	Auto detect Portrait* Landscape	For some features to work correctly, you must specify the way the content of the original document is placed on the page. Portrait orientation means the short edge of the page is along the top. Landscape orientation means the long edge of the page is along the top. In the Orientation area, select whether the original document has a portrait or landscape orientation.
			2-Sided Format	Book-style* Flip-style	Use to configure the default style for 2-sided print jobs. If the Book-style option is selected, the back side of the page is printed the right way up. This option is for print jobs that are bound along the left edge. If the Flip-style option is selected, the back side of the page is printed upside-down. This option is for print jobs that are bound along the top edge.

Table 2-18 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Color/Black		Automatically detect* Color Black/Gray Black	Use to enable or disable color scanning. Automatically detect: Automatically scans documents in color if at least one page has color. Color: Scans documents in color. Black/Gray: Scans documents in grayscale. Black: Scans documents in black and white with a compressed file size.
		Original Size		Selelct from a list of supported sizes.	Use to describe the page size of the original document.
		Notification		Do not notify* Notify when job completes Notify only if job fails	Configure to receive notification about the status of a sent document. Do not notify: Turns off this feature. Notify when job completes: Select to receive notification for this job only.
				Print E-mail	Notify only if job fails: Select to receive notification only if the job is not sent successfully. Print: Select to print the notification at this product.
			Include Thumbnail		**NOTE:** When sending an analog fax, select Include Thumbnail to receive a thumbnail image of the first page of the fax in your notification.

Table 2-18 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			Notification E-mail address		E-mail: Select to receive the notification in an email. Touch the text box following E-mail Address:, and type the email address for the notification.
		Image Adjustment	Darkness		Use to improve the overall quality of the copy. Adjust the Darkness setting to increase or decrease the amount of white and black in the colors.
			Contrast		Adjust the Contrast setting to increase or decrease the difference between the lightest and darkest color on the page.
			Background Cleanup		Adjust theBackground Cleanup setting if you are having trouble copying a faint image.
			Sharpness		Adjust the Sharpness setting to clarify or soften the image. For example, increasing the sharpness could make text appear crisper, but decreasing it could make photographs appear smoother.
			Automatic Tone		
			Default		

Table 2-18 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Job Build		Job Build off* Job Build on	Use to combine several original documents into one job. Also use to scan an original document that has more pages than the document feeder can accommodate at one time. The product temporarily saves all the scanned images. After you have scanned all the pages for the job, touch Finish to finish the job.
		Cropping Options		Do not crop* Crop to content	Use this menu item to automatically crop the scan for digital sending. Use the Crop to content option to scan the smallest possible area that has detectable content.
		Erase Edges		Use Inches Back side erase Front side erase	Use this menu item to remove blemishes, such as dark borders or staple marks, by cleaning the specified edges of the scanned image. In each of the text boxes enter the measurements, in millimeters or inches, for how much of the top edge, bottom edge, left edge, and right edge to clean.
		Blank Page Suppression		Disabled* Enabled	Use to prevent blank pages in the original document from being included in the output document.

Table 2-18 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Digital Send Service Setup	Allow Usage of Digital Sending Software (DSS) Server			Enabled* Disabled	Configure how the product interacts with the HP Digital Sending Software (DSS) server. HP DSS handles digital sending tasks, such as faxing, emailing, and sending scanned documents to a network folder or USB storage device. Use the Allow Usage of Digital Sending Software (DSS) Server option to configure the product to use HP DSS.
	Allow Transfer to New Digital Sending Software (DSS) Server			Enabled* Disabled	Use the Allow Transfer to New Digital Sending Software (DSS) Server option to specify whether DSS management of a product is transferable to a different DSS.

Fax Settings menu

To display: At the product control panel, select the Administration menu, and then select the Fax Settings menu.

In the following table, asterisks (*) indicate the factory default setting.

Table 2-19 Fax Settings menu

First level	Second level	Third level	Fourth level	Values	Description
Fax Send Settings	Fax Send Setup	Fax Setup Wizard			Configure settings for sending faxes from the product. Use the Fax Setup Wizard feature to set up options for faxing. **NOTE:** To set up LAN fax or Internet fax, use the HP Embedded Web Server. To open the HP Embedded Web Server, type the product network address into a Web browser. To configure the fax features, select the **Fax** tab.
		Fax Dialing Settings	Fax Dial Volume	Off Low* High	These settings control how the fax modem dials the outgoing fax number when faxes are sent.
			Dialing Mode	Tone* Pulse	
			Redial Interval	1 – 5 Minutes Default = 5 minutes	
			Fax Send Speed	Fast* Medium Slow	
			Dialing Prefix		
			Detect Dial Tone		
			Redial on Error	Range: 0 – 9 Default = 2	
			Redial on No Answer	Range: 0 – 2 Default = 0	
			Redial on Busy	Range: 0 – 9 Default = 3	

Table 2-19 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		General Fax Send Settings	Fax Number Confirmation	Enabled Disabled*	If this feature is enabled, you must enter the fax number twice.
			PC Fax Send	Enabled* Disabled	Enables users who have the correct driver installed to send faxes through the product from their computers.
			JBIG Compression	Enabled* Disabled	The JBIG compression reduces fax-transmission time, which can result in lower phone charges. However, using JBIG compression sometimes causes compatibility problems with older fax machines. If this occurs, turn off the JBIG compression.
			Error Correction Mode	Enabled* Disabled	When error-correction mode is enabled and an error occurs during fax transmission, the product sends or receives the error portion again.
			Fax Header	Prepend* Overlay	Use to prepend or overlay the fax header page.
			Fax Number Speed Dial Matching	Enabled Disabled*	Use this item to match fax number that you type to numbers that are saved as a speed dial.

Table 2-19 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Billing Codes	Enable Billing Codes	Off On*	When billing codes are enabled, a prompt displays that asks the user to enter the billing code for an outgoing fax. This prompt does not appear if the Allow users to edit billing codes check box is not checked. You can also use the Billing Codes report in the Reports menu to view the list of the billing codes that have been used for faxes that have been sent from the product. The list is grouped by billing code and also shows fax details. This feature can be used for billing or usage tracking.
			Default Billing Code		Specify a default billing code for faxing. If you specify a default billing code, this code displays in the Billing Code field when the user sends an outgoing fax. If this field is blank, no default billing code is provided for the user.
			Minimum Length	Range: 1 – 16 Default = 1	Specify the required length of the billing code. Billing codes can be between 1 and 16 characters long.
			Allow users to edit billing codes	Off On*	

Table 2-19 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Default Job Options	Image Preview		Make optional* Require preview Disable preview	Use the Image Preview feature to scan a document and display a preview before completing the job. Select whether this feature is available on the product. Make optional: The feature is optional, depending on the user who is signed in. Require preview Previews are required for all users. Disable preview: Previews are disabled for all users.
		Resolution		Standard (100 x 200dpi)* Fine (200 x 200dpi) Superfine (300 x 300dpi)	Select the resolution for outgoing faxes. If you increase the resolution, faxes might be clearer but they could transmit more slowly. Some file types, for example a file that will be processed with OCR, require a specific resolution. When these file types are selected, the Resolution setting might be automatically changed to a valid value.

Table 2-19 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Original Sides		1-sided* 2-sided	Use to describe the layout for each side of the original document. First select whether the original document is printed on one side or both sides. Then touch the Orientation setting to indicate whether the original has portrait or landscape orientation. If it is printed on both sides, also select the 2-sided format that matches the original document.
			Orientation	Portrait* Landscape	For some features to work correctly, you must specify the way the content of the original document is placed on the page. Portrait: This setting means the short edge of the page is along the top. Landscape: This setting means the long edge of the page is along the top.

Table 2-19 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			2-Sided Format	Book-style* Flip-style	Book-style: The back side of the original is printed right-side-up, and the back side of the copy is printed the same way. Use this option for originals and copies that are bound along the left edge. Flip-style: The back side of the original is printed upside-down, and the back side of the copy is printed the same way. Use this option for originals and copies that are to be bound along the top edge.
		Notification		Do not notify* Notify when job completes Notify only if job fails	Use to receive notification about the status of a sent document. Do not notify: Turns off this feature. Notify when job completes: Select to receive notification for this job only. Notify only if job fails: Select to receive notification only if the job is not sent successfully.
				Print E-mail	Print: Select to print the notification at this product. E-mail: Select to receive the notification in an email. Touch the text box following E-mail Address:, and enter the email address for the notification.

Table 2-19 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			Include Thumbnail		When sending an analog fax, select Include Thumbnail to receive a thumbnail image of the first page of the fax in your notification.
			Notification E-mail address		Provide the email address that will receive notifications.
		Content Orientation	Orientation	Portrait* Landscape	For some features to work correctly, you must specify the way the content of the original document is placed on the page. Portrait: This setting means the short edge of the page is along the top. Landscape: This setting means the long edge of the page is along the top.
			2-Sided Format	Book-style* Flip-style	Use to configure the default style for 2-sided print jobs. If the Book-style option is selected, the back side of the page is printed the right way up. This option is for print jobs that are bound along the left edge. If the Flip-style option is selected, the back side of the page is printed upside-down. This option is for print jobs that are bound along the top edge.
		Original Size		Select from a list of sizes that the product supports.	Use to describe the page size of the original document.

Table 2-19 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Image Adjustment	Darkness		Use to improve the overall quality of the copy. Adjust the Darkness setting to increase or decrease the amount of white and black in the colors.
			Contrast		Adjust the Contrast setting to increase or decrease the difference between the lightest and darkest color on the page.
			Background Cleanup		Adjust theBackground Cleanup setting if you are having trouble copying a faint image.
			Sharpness		Adjust the Sharpness setting to clarify or soften the image. For example, increasing the sharpness could make text appear crisper, but decreasing it could make photographs appear smoother.
			Automatic Tone		
			Default		

Table 2-19 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Optimize Text/ Picture	Manually adjust*	Optimize For Text Printed picture Photograph	Optimizes the output for a particular type of content. You can optimize the output for text, printed pictures, or a mixture. Manually adjust: Use to manually optimize the setting for text or for pictures. Text: Use to optimize the text portion of the copy where text and/or pictures are on the original. Printed picture: Use for line drawings and preprinted images, such as magazine clippings or pages from books. Photograph: Best suited for making copies of printed pictures.
		Job Build		Job Build off* Job Build on	Use to divide a complex job into smaller segments. This is useful when you are copying or scanning an original document that has more pages than the document feeder can hold, or when you want to combine pages that have different sizes into one job. You can use either the glass or the document feeder to scan the original documents.
		Blank Page Suppression		Disabled* Enabled	Prevents blank pages in the original document from being included in the output document.

Table 2-19 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Fax Receive Settings	Fax Receive Setup	Ringer Volume		Off Low* High	Use to configure settings for receiving faxes.
		Rings To Answer		Range: 1–6 Default = 1	
		Fax Receive Speed		Fast* Medium Slow	
		Ring Interval		Range: 220–600 ms Default = 600 ms	
		Ring Frequency		Range: 1–200 Default = 68hz	
	Fax Printing Schedule			Always store faxes Always print faxes* Use Fax Printing Schedule	If you have concerns about the security of private faxes, use this feature to store faxes rather than having them automatically print. Select Incoming Fax Options, and then you can choose to always store faxes, always print them, or you can set up a schedule for each day of the week.
		Schedule Touch this to set up a fax printing schedule if you selected the Use Fax Printing Schedule option.	Add (plus sign) Edit Delete	Print incoming faxes Store incoming faxes Time Event Days	If you are using a fax printing schedule, use this menu to configure when to print faxes.

Table 2-19 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Blocked Fax Numbers	Fax Number to Block			The blocked fax list can contain up to 30 numbers. When the product receives a call from one of the blocked fax numbers, it deletes the incoming fax. It also logs the blocked fax in the activity log along with job-accounting information. Add blocked numbers: Enter a fax number into the Fax Number to Block field and then touch the arrow button to add a new number to the blocked fax list. Remove blocked numbers: Select a number and touch the Delete button to delete it from the blocked fax list. Clear all blocked numbers: Touch the Delete All button to clear all of the numbers from the blocked fax list. You can also use the Blocked Fax List report in the Information menu to view the list of the fax numbers that have been blocked on this product.

Table 2-19 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Default Job Options	Notification		Do not notify* Notify when job completes Notify only if job fails	Configure to receive notification about the status of a sent document. Do not notify: Turns off this feature. Notify when job completes: Select to receive notification for this job only. Notify only if job fails: Select to receive notification only if the job is not sent successfully.
				Print E-mail*	E-mail: Select to receive the notification in an email. Touch the text box following E-mail Address:, and enter the email address for the notification.
			Include Thumbnail		**NOTE:** When sending an analog fax, select Include Thumbnail to receive a thumbnail image of the first page of the fax in your notification.
			Notification E-mail address		
		Stamp Received Faxes		Enabled Disabled*	Use this option to add the date, time, sender's phone number, and page number to each page of the faxes that this product receives.

Table 2-19 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Fit to Page		Enabled* Disabled	Use to shrink faxes that are larger than Letter-size or A4-size so that they can fit onto a Letter-size or A4-size page. If this feature set to Disabled, faxes larger than Letter or A4 will flow across multiple pages.
		Paper Selection		Automatic* Select from a list of the trays.	
		Sides		1-sided* 2-sided	Use to describe the layout for each side of the original document. First select whether the original document is printed on one side or both sides. Then touch the Orientation setting to indicate whether the original has portrait or landscape orientation. If it is printed on both sides, also select the 2-sided format that matches the original document.
Fax Forwarding	Enable Fax Forwarding			Disabled* Enabled	Use to forward received faxes to another fax machine.
		Type of Fax Job to Forward		All faxes Sent faxes Received faxes	
		Fax Forwarding Number			
	Clear fax activity log				Clears all events from the Fax Activity Log list.

General Print Settings menu

To display: At the product control panel, select the Administration menu, and then select the General Print Settings menu.

In the following table, asterisks (*) indicate the factory default setting.

Table 2-20 General Print Settings menu

First level	Second level	Values	Description
Manual Feed		Enabled Disabled*	Use to enable or disable the manual-feed feature, which allows the user to feed paper into the product by hand. When this feature is enabled, the user can select manual feed from the control panel as the paper source for a job. If a tray is not specified as part of a job, manual feed is selected.
Courier Font		Regular* Dark	Select which version of the Courier font you want to use. The factory default setting is Regular, which uses an average stroke width. The Dark setting can be used if a heavier Courier font is needed.
Wide A4		Enabled Disabled*	Changes the printable area of A4-size paper. If you enable this option, eighty 10-pitch characters can be printed on a single line of A4 paper.
Print PS Errors		Enabled Disabled*	Use this feature to select whether a PostScript (PS) error page is printed when the product encounters a PS error.
Print PDF Errors		Enabled Disabled*	Selects whether a PDF error page is printed when the product encounters a PDF error.
Personality		Auto* PCL POSTSCRIPT PDF	Configures the default print language or personality for the product. Normally you should not change the product language. If you change the setting to a specific product language, the product does not automatically switch from one language to another unless specific software commands are sent to it.

Table 2-20 General Print Settings menu (continued)

First level	Second level	Values	Description
PCL	Form Length	Range: 5 – 128 Default = 60	Controls the PCL print-command options. PCL is a set of productcommands that Hewlett-Packard developed to provide access to productfeatures. Use the Form Length feature to select the user-soft default vertical form length.
	Orientation	Portrait* Landscape	Select the orientation that is most often used for copy or scan originals. Select the Portrait option if the short edge is at the top or select the Landscape option if the long edge is at the top.
	Font Source	Internal*	Selects the font source for the user-soft default font. The list of available options varies depending on the installed product options.
	Font Number	Range: 0 – 110 Default = 0	Specifies the font number for the user-soft default font using the source that is specified in the Font Source menu. The product assigns a number to each font and lists it on the PCL font list. The font number displays in the Font # column of the printout.
	Font Pitch	Range: 0.44 – 99.99 Default = 10	If the Font Source option and the Font Number setting indicate a contour font, then use this feature to select a default pitch (for a fixed-spaced font).
	Font Point Size	Range: 4.00 – 999.75 Default = 12.00	If the Font Source option and the Font Number setting indicate a contour font, then use this feature to select a default point size (for a proportional-spaced font).
	Symbol Set	Select from a list of symbol sets.	Select any one of several available symbol sets from the control panel. A symbol set is a unique grouping of all the characters in a font. The factory default value for this option is PC-8. Either PC-8 or PC-850 are recommended for line-draw characters.

Table 2-20 General Print Settings menu (continued)

First level	Second level	Values	Description
	Append CR to LF	No* Yes	Configure whether a carriage return (CR) is appended to each line feed (LF) encountered in backwards-compatible PCL jobs (pure text, no job control). Select Yes to append the carriage return. The default setting is No. Some environments, such as UNIX, indicate a new line by using only the line-feed control code. This option allows the user to append the required carriage return to each line feed.
	Suppress Blank Pages	No* Yes	This option is for users who are generating their own PCL, which could include extra form feeds that would cause blank pages to be printed. When the Yes option is selected, form feeds are ignored if the page is blank.
	Media Source Mapping	Standard* Classic	Use to select and maintain input trays by number when you are not using the product driver, or when the software program has no option for tray selection. The following options are available: Standard: Tray numbering is based on newer HP LaserJet models. Classic: Tray numbering is based on HP LaserJet 4 and older models.

Default Print Options menu

To display: At the product control panel, select the Administration menu, and then select the Default Print Options menu.

In the following table, asterisks (*) indicate the factory default setting.

Table 2-21 Default Print Options menu

First level	Second level	Values	Description
Number of Copies		Range: 1–32000 Default = 1	Sets the default number of copies for a copy job. This default applies when the Copy function or the Quick Copy function is initiated from the product Home screen.

Table 2-21 Default Print Options menu (continued)

First level	Second level	Values	Description
Default Paper Size		Select from a list of sizes that the product supports.	Configures the default paper size used for print jobs.
Default Custom Paper Size	X Dimension	Range: 3–8.5 inches Default = 8.5 inches	Configures the default paper size that is used when the user selects **Custom** as the paper size for a print job.
	Y Dimension	Range: 5–14 inches Default = 14 inches	
	Use Inches	Enabled* Disabled	
Sides		1-sided* 2-sided	Use to indicate whether the original document is printed on one or both sides, and whether the copies should be printed on one or both sides. For example, select the 1-sided original, 2-sided output option when the original is printed on one side, but you want to make two-sided copies. Select the Orientation setting to specify portrait or landscape orientation and to select the way the second sides are printed.
2-Sided Format		Book-style* Flip-style	Configures the default style for 2-sided print jobs. If the Book-style option is selected, the back side of the page is printed the right way up. This option is for print jobs that are bound along the left edge. If the Flip-style option is selected, the back side of the page is printed upside-down. This option is for print jobs that are bound along the top edge.
Edge-to-Edge		Normal (recommended)* Edge-to-Edge output	Use to avoid shadows that can appear along the edges of copies when the original document is printed close to the edges.

Display Settings menu

To display: At the product control panel, select the Administration menu, and then select the Display Settings menu.

In the following table, asterisks (*) indicate the factory default setting.

Table 2-22 Display Settings menu

First level	Second level	Values	Description
Key Press Sound		On* Off	Use to specify whether you hear a sound when you touch the screen or press buttons on the control panel.
Language Settings	Language	Select from a list of languages that the product supports.	Use to select a different language for control-panel messages and specify the default keyboard layout. When you select a new language, the keyboard layout automatically changes to match the factory default for the selected language.
	Keyboard Layout	Each language has a default keyboard layout. To change it, select from a list of layouts.	Select the default keyboard layout that matches the language you want to use.
How to Connect Button		Display* Hide	Use this menu item to display or hide the How to Connect Button on the Home screen.
Date and Time		Show Date and Time* Hide Date and Time	Select whether to display or hide the date and time on the control panel Home screen.
Inactivity Timeout		Range: 10 – 300 seconds Default = 60 seconds	Specifies the amount of time that elapses between any activity on the control panel and when the product resets to the default settings. When the timeout expires, the control-panel display returns to the Home menu, and any user signed in to the product is signed out.

Table 2-22 Display Settings menu (continued)

First level	Second level	Values	Description
Clearable Warnings		On Job*	Use this feature to set the period that a clearable warning displays on the control panel. If the On setting is selected, clearable warnings appear until the Clearable Warnings button is pressed. If theJob setting is selected, clearable warnings stay on the display during the job that generated the warning and disappear from the display when the next job starts.
Continuable Events		Auto-continue (10 seconds)* Touch OK to continue	Use this option to configure the product behavior when the product encounters certain errors. If the Auto-continue (10 seconds) option is selected, the job will continue after 10 seconds. If theTouch OK to continue option is selected, the job will stop and require the user to press the OK button before continuing.

Manage Supplies menu

To display: At the product control panel, select the Administration menu, and then select the Manage Supplies menu.

In the following table, asterisks (*) indicate the factory default setting.

Table 2-23 Manage Supplies menu

First level	Second level	Third level	Fourth level	Values	Description
Supplies Status				Print View	
Supply Settings	Black Cartridge	Low Threshold Settings		1-100% Default = 10%	Set the estimated percentage at which the product notifies you when the toner cartridge is very low.
		Very Low Settings		Stop Prompt to continue* Continue	Specifies how the product notifies you when the toner cartridge is very low. Stop: The product stops until you replace the toner cartridge. Prompt to continue: The product stops and prompts you to replace the toner cartridge. You can acknowledge the prompt and continue printing. Continue: The product alerts you that a toner cartridge is very low, but it continues printing.
	Document Feeder Kit	Low Threshold Settings		1-100% Default = 10%	Set the percentage at which the product notifies you when the document feeder kit is very low.

Table 2-23 Manage Supplies menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Very Low Settings		Stop Prompt to continue* Continue	Configure how the product responds when the document feeder kit is reaching the end of its estimated life. Stop: The product stops until you replace the document feeder kit. Prompt to continue: The product stops and prompts you to replace the document feeder kit. You can acknowledge the prompt and continue printing. Continue: The product alerts you that the document feeder kit is very low, but it continues printing.
	Store Usage Data			On supplies Not on supplies	The Store Usage Data menu provides a way to suppress the toner cartridges from storing most of the information gathered exclusively for the purpose of understanding the usage of the product. Select the On supplies setting to store the data on the toner cartridge memory chip. Select the Not on supplies setting to suppress the information from being stored on the memory chip.

Table 2-23 Manage Supplies menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Supply Messages		Low Message		On* Off	Use to configure whether a message displays on the control panel when supplies are getting low, but have not yet reached the low threshold.
Reset Supplies	New Document Feeder Kit			Reset Cancel	Select this option if you have installed a new document feeder kit.

Manage Trays menu

To display: At the product control panel, select the Administration menu, and then select the Manage Trays menu.

In the following table, asterisks (*) indicate the factory default setting.

Table 2-24 Manage Trays menu

First level	Values	Description
Use Requested Tray	Exclusively* First	Controls how the product handles jobs that have specified a specific input tray. Two options are available: Exclusively: The product never selects a different tray when the user has indicated that a specific tray should be used, even if that tray is empty. First: The product pulls from another tray if the specified tray is empty, even though the user specifically indicated a tray for the job.
Manually Feed Prompt	Always* Unless loaded	Indicate whether a prompt should appear when the type or size for a job does not match the specified tray and the product pulls from the multipurpose tray instead. Two options are available: Always: A prompt always displays before using the multipurpose tray. Unless loaded: A message displays only if the multipurpose tray is empty.

Table 2-24 Manage Trays menu (continued)

First level	Values	Description
Size/Type Prompt	Display* Do not display	Controls whether the tray configuration message displays whenever a tray is closed. Two options are available: Display: This option shows the tray configuration message when a tray is closed. The user is able to configure the tray settings directly from this message. Do not display: This option prevents the tray configuration message from automatically appearing.
Use Another Tray	Enabled* Disabled	Use to turn on or off the control-panel prompt to select another tray when the specified tray is empty. Two options are available: Enabled: When this option is selected, the user is prompted either to add paper to the selected tray or to choose a different tray. Disabled: When this option is selected, the user is not given the option of selecting a different tray. The product prompts the user to add paper to the tray that was initially selected.
Alternative Letterhead Mode	Disabled* Enabled	Use to load letterhead or preprinted paper into the tray the same way for all print jobs, whether you are printing to one side of the sheet or to both sides of the sheet. When this option is selected, load the paper as you would for printing on both sides. See the user documentation that came with the product for instructions about loading letterhead for printing on both sides. When this option is selected, the product speed slows to the speed required for printing on both sides.

Table 2-24 Manage Trays menu (continued)

First level	Values	Description
Duplex Blank Pages	Auto* Yes	Control how the product handles two-sided jobs (duplexing). Two options are available: Auto: This option enables Smart Duplexing, which instructs the product not to process blank pages. Yes: This option disables Smart Duplexing and forces the duplexer to flip the sheet of paper even if it is printed on only one side. This might be preferable for certain jobs that use paper types such as letterhead or prepunched paper.
Override A4/Letter	Yes* No	Prints on letter-size paper when an A4 job is sent but no A4-size paper is loaded in the product (or to print on A4 paper when a letter-size job is sent but no letter-size paper is loaded). This option will also override A3 with ledger-size paper and ledger with A3-size paper.

Network Settings menu

To display: At the product control panel, select the Administration menu, and then select the Network Settings menu.

In the following table, asterisks (*) indicate the factory default setting.

Table 2-25 Network Settings menu

First level	Values	Description
I/O Timeout	Range: 5 – 300 sec Default = 15	Use to set the I/O timeout period in seconds. I/O timeout refers to the elapsed time before a print job fails. If the stream of data that the product receives for a print job gets interrupted, this setting indicates how long the product will wait before it reports that the job has failed.
Jetdirect Menu	See the table that follows for details. These menus have the same structure. If an additional HP Jetdirect network card is installed in the EIO slot, then both menus are available.	

Table 2-26 Jetdirect Menu

First level	Second level	Third level	Fourth level	Values	Description
Information	Print Sec Report			Yes No*	Yes: Prints a page that contains the current security settings on the HP Jetdirect print server. No: A security settings page is not printed.
TCP/IP	Enable			On* Off	On: Enable the TCP/IP protocol. Off: Disable the TCP/IP protocol.
	Host Name			Use the arrow buttons to edit the host name. **NPIXXXXXX***	An alphanumeric string, up to 32 characters, used to identify the product. This name is listed on the HP Jetdirect configuration page. The default host name is NPIxxxxxx, where xxxxxx is the last six digits of the LAN hardware (MAC) address.

Table 2-26 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	IPV4 Settings	Config Method		Bootp DHCP* Auto IP Manual	Specifies the method that TCP/IPv4 parameters will be configured on the HP Jetdirect print server. Bootp (Bootstrap Protocol): Use for automatic configuration from a BootP server. DHCP (Dynamic Host Configuration Protocol): Use for automatic configuration from a DHCPv4 server. If selected and a DHCP lease exists, the DHCP Release menu and the DHCP Renew menu are available to set DHCP lease options. Auto IP: Use for automatic link-local IPv4 addressing. An address in the form 169.254.x.x is assigned automatically. If you set this option to the Manual setting, use the Manual Settings menu to configure TCP/IPv4 parameters.
		Manual Settings **NOTE:** This menu is available only if you select the Manual option under the Config Method menu.	IP Address	Enter the address.	(Available only if the Config Method option is set to the Manual option.) Configure parameters directly from the product control panel:
			Subnet Mask	Enter the address.	
			Default Gateway	Enter the address.	

Table 2-26 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Default IP		Auto IP* Legacy	Specify the IP address to default to when the print server is unable to obtain an IP address from the network during a forced TCP/IP reconfiguration (for example, when manually configured to use BootP or DHCP). **NOTE:** This feature assigns a static IP address that might interfere with a managed network. Auto IP: A link-local IP address 169.254.x.x is set. Legacy: The address 192.0.0.192 is set, consistent with older HP Jetdirect products.
		Primary DNS		Range: 0 – 255 Default = **xxx.xxx.xx.xx**	Specify the IP address (n.n.n.n) of a Primary Domain Name System (DNS) Server.
		Secondary DNS		Range: 0 – 255 Default = **0.0.0.0**	Specify the IP address (n.n.n.n) of a Secondary DNS Server.
	IPV6 Settings	Enable		Off On*	Use this item to enable or disable IPv6 operation on the print server. Off: IPv6 is disabled. On: IPv6 is enabled.
		Address	Manual Settings	Enable Address	Use this item to enable and manually configure a TCP/IPv6 address.

Table 2-26 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		DHCPV6 Policy		Router Specified Router Unavailable* Always	Router Specified: The stateful auto-configuration method to be used by the print server is determined by a router. The router specifies whether the print server obtains its address, its configuration information, or both from a DHCPv6 server. Router Unavailable: If a router is not available, the print server should attempt to obtain its stateful configuration from a DHCPv6 server. Always: Whether a router is available, the print server always attempts to obtain its stateful configuration from a DHCPv6 server.
		Primary DNS			
		Secondary DNS			

Table 2-26 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Proxy Server			Select from a provided list.	Specifies the proxy server to be used by embedded applications in the product. A proxy server is typically used by network clients for Internet access. It caches Web pages, and provides a degree of Internet security, for those clients. To specify a proxy server, enter its IPv4 address or fully-qualified domain name. The name can be up to 255 octets. For some networks, you might need to contact your Internet Service Provider (ISP) for the proxy server address.
	Proxy Port			Default = **00080**	Enter the port number used by the proxy server for client support. The port number identifies the port reserved for proxy activity on your network, and can be a value from 0 to 65535.
	Idle Timeout			Default = **0270**	The time period, in seconds, after which an idle TCP print data connection is closed (default is 270 seconds, 0 disables the timeout).

Table 2-26 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Security	Secure Web			HTTPS Required* HTTPS Optional	For configuration management, specify whether the HP Embedded Web Server will accept communications using HTTPS (Secure HTTP) only, or both HTTP and HTTPS. HTTPS Required: For secure, encrypted communications, only HTTPS access is accepted. The print server will appear as a secure site.
	IPSEC			Keep Disable*	Specify the IPSec status on the print server. Keep: IPSec status remains the same as currently configured. Disable: IPSec operation on the print server is disabled.
	802.1X			Reset Keep*	Specify whether the 802.1X settings on the print server are reset to the factory defaults. Reset: The 802.1X settings are reset to the factory defaults. Keep: The current 802.1X settings are maintained.

Table 2-26 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Reset Security			Yes No*	Specify whether the current security settings on the print server will be saved or reset to factory defaults. Yes: Security settings are reset to factory defaults. No: The current security settings are maintained.

Table 2-26 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Diagnostics	Embedded Tests	LAN HW Test		Yes No*	Provides tests to help diagnose network hardware or TCP/IP network connection problems. Embedded tests help to identify whether a network fault is internal or external to the product. Use an embedded test to check hardware and communication paths on the print server. After you select and enable a test and set the execution time, you must select the Execute option to initiate the test. Depending on the execution time, a selected test runs continuously until either the product is turned off, or an error occurs and a diagnostic page is printed. **CAUTION:** Running this embedded test will erase your TCP/IP configuration. This test performs an internal loopback test. An internal loopback test will send and receive packets only on the internal network hardware. There are no external transmissions on your network.

Table 2-26 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		HTTP Test		Yes No*	This test checks operation of HTTP by retrieving predefined pages from the product, and tests the HP Embedded Web Server. Select the Yes option to choose this test, or the No option to not choose it.
		SNMP Test		Yes No*	This test checks operation of SNMP communications by accessing predefined SNMP objects on the product. Select the Yes option to choose this test, or the No option to not choose it.
		Data Path Test		Yes No*	This test helps to identify data path and corruption problems on an HP postscript level 3 emulation product. It sends a predefined PS file to the product, However, the test is paperless; the file will not print. Select the Yes option to choose this test, or the No option to not choose it.
		Select All Tests		Yes No*	Use this item to select all available embedded tests. Select the Yes option to choose all tests. Select the No option to select individual tests.

Table 2-26 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Execution Time [H]		Range: 1 – 24 hours Default = 1 hour	Specify the length of time (in hours) that an embedded test will be run. If you select zero (0), the test runs indefinitely until an error occurs or the product is turned off. Data gathered from the HTTP, SNMP, and Data Path tests is printed after the tests have completed.
		Execute		No* Yes	No: Do not initiate the selected tests. Yes: Initiate the selected tests.
	Ping Test	Dest Type		IPv4 IPv6	This test is used to check network communications. This test sends link-level packets to a remote network host, then waits for an appropriate response. To run a ping test, set the following items: Dest Type Specify whether the target product is an IPv4 or IPv6 node.
		Dest IPv4		Range: 0 – 255 Default = **127.0.0.1**	Enter the IPv4 address.
		Dest IPv6		Select from a provided list. Default = **: : 1**	Enter the IPv6 address.
		Packet Size		Default = **64**	Specify the size of each packet, in bytes, to be sent to the remote host. The minimum is 64 (default) and the maximum is 2048.

Table 2-26 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Timeout		Default = **001**	Specify the length of time, in seconds, to wait for a response from the remote host. The maximum is 100.
		Count		Default = **004**	Specify the number of ping test packets to send for this test. Select a value from 0 to 100. To configure the test to run continuously, select 0.
		Print Results		Yes No*	
		Execute		Yes No*	No: Do not initiate the selected tests. Yes: Initiate the selected tests.
	Ping Results	Packets Sent		Default = **00000**	Shows the number of packets (0 - 65535) sent to the remote host since the most recent test was initiated or completed..
		Packets Received		Default = **00000**	Shows the number of packets (0 - 65535) received from the remote host since the most recent test was initiated or completed. The default is 0.
		Percent Lost		Default = **000**	Shows the percent (0 to 100) of ping test packets that were sent with no response from the remote host since the most recent test was initiated or completed.

Table 2-26 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		RTT Min		Default = **0000**	Shows the minimum detected roundtrip-time (RTT), from 0 to 4096 milliseconds, for packet transmission and response.
		RTT Max		Default = **0000**	Shows the maximum detected roundtrip-time (RTT), from 0 to 4096 milliseconds, for packet transmission and response.
		RTT Average		Default = **0000**	Shows the average round-trip-time (RTT), from 0 to 4096 milliseconds, for packet transmission and response.
		Ping In Progress		Yes No*	Shows whether a ping test is in progress. Yes: Indicates a test in progress. No: Indicates that a test completed or was not run.
		Refresh		Yes No*	When viewing the ping test results, this item upgrades the ping test data with current results. Select the Yes option to upgrade the data, or the No option to maintain the existing data. However, a refresh automatically occurs when the menu times out or you manually return to the main menu.

Table 2-26 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Link Speed				Auto*	The link speed and communication mode of the print server must match the network. The available settings depend on the product and installed print server. Select one of the following link configuration settings: **CAUTION:** If you change the link setting, network communications with the print server and network product might be lost. The print server uses auto-negotiation to configure itself with the highest link speed and communication mode allowed. If auto-negotiation fails, either the 100TX Half feature or the 10T Half feature is set depending on the detected link speed of the hub/switch port. (A 1000T half-duplex selection is not supported.)
				10T Half	10 Mbps, half-duplex operation.
				10T Full	10 Mbps, full-duplex operation.
				10T Auto	100 Mbps, half-duplex operation.
				100TX Half	100 Mbps, full-duplex operation.

Table 2-26 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
				100TX Full	Limits auto-negotiation to a maximum link speed of 100 Mbps.
				100TX Auto	1000 Mbps, full-duplex operation.

Troubleshooting menu

To display: At the product control panel, select the Administration menu, and then select the Troubleshooting menu.

In the following table, asterisks (*) indicate the factory default setting.

Table 2-27 Troubleshooting menu

First level	Second level	Third level	Fourth level	Values	Description
Event Log				View* Print	Use to print a list of the 1,000 most recent events in the Event Log. For each event, the printed log shows the error number, page count, error code, and description or personality.
Paper Path Page				View* Print	Shows how many pages were printed from each tray.
Fax	Fax T.30 Trace	Print T.30 Report		Print	Use to print or configure the fax T.30 trace report. T.30 is the standard that specifies handshaking, protocols, and error correction between fax machines.

Table 2-27 Troubleshooting menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		When to Print Report		Never automatically print* Print after every fax Print only after fax send jobs Print after any fax error Print only after fax send errors Print only after fax receive errors	Configure the T.30 report to print after certain events. You can choose to print the report after every fax job, every fax job sent, every fax job received, every send error, or every receive error.
	Fax V.34			Normal* Off	Use to disable V.34 modulations if several fax failures have occurred or if phone line conditions require it.
	Fax Speaker Mode			Normal* Diagnostic	Used by a technician to evaluate and diagnose fax issues by listening to the sounds of fax modulations.
	Fax Log Entries			On Off*	The standard fax log includes basic information such as the time and whether the fax was successful. The setailed fax log shows the intermediate results of the redial process not shown in the standard fax log.
Print Quality Pages	Fuser Test Page			Print	Use to print pages that help you resolve problems with print quality.
Diagnostic Tests	Paper Path Sensors			Select from a list of the product sensors.	Initiates a test of the paper path sensors.
	Paper Path Test	Print Test Page			

Table 2-27 Troubleshooting menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Source Tray		Select from a list of the available trays.	Generates a test page for testing paper handling features. You can define the path that is used for the test in order to test specific paper paths.
		Output Bin		All bins Face down Face up	
		Test Duplex Path		Off* On	
		Number of Copies		Range: 1–500 Default = 1	Sets the default number of copies for a copy job. This default applies when the Copy or Quick Copy function is initiated from the product Home screen. The factory default setting is 1.
	Manual Sensor Test			Select from a list of available components. Reset Sensors	Test the product sensors and switches for correct operation. Each sensor is displayed on the control-panel screen, along with its status. Manually trip each sensor and watch for it to change on the screen. Press the Stop button to abort the test.
	Tray/Bin Manual Sensor Test			Select from a list of available components. Reset Sensors	Test the sensors in the trays and bins for correct operation. Each sensor is displayed on the control-panel screen, along with its status. Manually trip each sensor and watch for it to change on the screen. Press the Stop button to abort the test.

Table 2-27 Troubleshooting menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Component Test			Select from a list of available components.	Use to exercise individual parts independently to isolate noise, leaking, or other issues. To start the test, select one of the components. The test will run the number of times specified by the Repeat option. You might be prompted to remove parts from the product during the test. Press the Stop button to abort the test.
	Print/Stop Test				Specify the length of time in milliseconds (0-60,000).
	Continuous Scan			2-sided	
	Scanner Tests			Sensors	
Retrieve Diagnostic Data				Create device data file Create zipped debug information file Include crash dump files Clean up debug information Send to E-mail Export to USB	Create files that contain information about the product that can help identify the cause of problems.
Generate Debug Data				Start	

Device Maintenance menu

Backup/Restore menu

To display: At the product control panel, select the Device Maintenance menu, and then select the Backup/Restore menu.

In the following table, asterisks (*) indicate the factory default setting.

Table 2-28 Backup/Restore menu

First level	Second level	Third level	Values	Description
Backup Data	Enable Scheduled Backups	Backup Time	Enter a time	
		Days Between Backups	Enter the number of days	
	Backup Now			
	Export Last Backup			
Restore Data			Insert a USB drive that contains the backup file.	

Calibration/Cleaning menu

To display: At the product control panel, select the Device Maintenance menu, and then select the Calibration/Cleaning menu.

In the following table, asterisks (*) indicate the factory default setting.

Table 2-29 Calibration/Cleaning menu

First level	Second level	Values	Description
Cleaning Settings	Auto Cleaning	Off* On	Use to select the Auto Cleaning menu or the Cleaning Interval menu.
	Cleaning Interval	Select from a list of cleaning intervals.	Use to set the interval when the cleaning page should be printed. The interval is measured by the number of pages printed.
	Cleaning Size	Select from a list of support sizes.	Select the paper size to use for the cleaning page.
Cleaning Page		Print	Use to process the cleaning page that was created by using the Create Cleaning Page menu. The process takes up to 1.5 minutes.
Calibrate Scanner			Touch Next to calibrate the device scanner. Messages on the control panel display will lead you through the calibration process.
Clean Rollers			Perform automatic cleaning for the document-feeder rollers.

Table 2-29 Calibration/Cleaning menu (continued)

First level	Second level	Values	Description
Clean Document Feeder Settings	Low Threshold Settings	Range: 0–100% Default = 10%	Configure cleaning settings for the document feeder.
	Very Low Settings	Stop Prompt to continue* Continue	

USB Firmware Upgrade menu

To display: At the product control panel, select the Device Maintenance menu, and then select the USB Firmware Upgrade menu.

Insert a USB storage device with a firmware upgrade bundle into the USB port, and follow the on-screen instructions.

Service menu

To display: At the product control panel, select the Device Maintenance menu, and then select the Service menu.

The Service menu is locked and requires a PIN for access. This menu is intended for use by authorized service personnel.

Interpret control-panel messages

Control-panel message types

The control-panel messages and event code errors indicate the current product status or situations that might require action.

NOTE: Event log errors do not appear on the control-panel display. Access the event log to view or print the event log errors.

Control-panel messages appear temporarily and might require that you acknowledge the message by touching the OK button to resume printing or by touching the Stop button to cancel the job. With certain messages, the job might not finish printing or the print quality might be affected. If the message is related to printing and the auto-continue feature is on, the product will attempt to resume printing after the message has appeared for 10 seconds without acknowledgement.

For some messages, restarting the product might fix the problem. If a critical error persists, the product might require service.

Control-panel messages

11.00.YY Internal clock error To continue, touch "OK"

Description

The product real-time clock has experienced an error.

- XX = 01: Clock battery failed
- XX = 02: Real-time clock failed

Recommended action

Whenever the product is turned off and then turned on again, set the time and date at the control panel.

If the error persists, replace the formatter.

13.A3.D3 or 13.A4.D4

Description

13.A3.D3: paper input delay jam 2 (paper did not reach the tray 3 feed sensor in time.)

13.A4.D4: paper input delay jam 3 (paper did not reach the tray 4 feed sensor in time.)

Recommended action

Recovery steps

1. Remove the tray (3 or 4).
2. Remove jammed paper if present.

3. Reinstall the tray (3 or 4).
4. Remove jammed paper if present.

Troubleshooting and parts

1. Make sure that the paper guides are snug against the paper stack.
2. Make sure that the paper meets HP specifications.
3. Use the product control panel or the HP Embedded Web Server to make sure that the tray is configured for the media size and type.
4. Paper sensor associated with this message: PS8008.
5. Inspect the separation pad and pick roller. Clean or replace if required.
6. If the pick roller rotates freely (it should not), make sure that the roller is seated properly. If after re-seating the roller it still rotates freely, replace the Tray 3 or Tray 4 feeder assembly.

13.A3.D4

Description

Paper input delay jam 2 (paper did not reach the tray 3 feed sensor in time.)

Tray 4 feed sensor.

Recommended action

Recovery steps

1. Remove the tray (3 or 4).
2. Remove jammed paper if present.
3. Reinstall the tray (3 or 4).
4. Remove jammed paper if present.

Troubleshooting and parts

1. Make sure that the paper meets HP specifications.
2. Use the product control panel or the HP Embedded Web Server to make sure that the tray is configured for the media size and type.
3. Paper sensor associated with this message: PS8008.
4. Check for a blockage in the Tray 3 or Tray 4 paper path.

13.A3.FF or 13.A4.FF

Description

Residual media in paper path jam 1.

Tray 3 or Tray 4 feed sensor.

Recommended action

Recovery steps

1. Remove the tray (3 or 4).
2. Remove jammed paper if present.
3. Reinstall the tray (3 or 4).
4. Remove jammed paper if present.

Troubleshooting and parts

1. Paper Sensor associated with this message: PS8008.
2. Check for a blockage in the paper path.

13.B2.D1

Description

Tray 1 jam (no-pick).

Paper input delay jam 1. The paper did not reach the registration or Top sensor in time.

Recommended action

Recovery steps

1. Open top cover.
2. Remove the toner cartridge.
3. Lift the green flaps for access.
4. Remove jammed paper if present.
5. Reinstall cartridge and then close the top cover.

Troubleshooting and parts

1. Make sure that the paper guides are snug against the paper stack.
2. Make sure that the paper meets HP specifications.
3. Use the product control panel or the HP Embedded Web Server to make sure that the tray is configured for the media size and type.
4. Paper sensor associated with this message: TOP Sensor (PS215). Use the Manual sensor test to test the sensor. If the sensor is not working, replace the Top sensor PCA (RM1-8617-000CN).
5. Inspect the separation pad and pick roller. Clean or replace if required.

13.B2.D2

Description

Paper input delay jam 1 (paper did not reach the registration sensor in time; no pick)

Tray 2; registration or Top sensor.

Recommended action

Recovery steps

1. Remove Tray 2.
2. Remove jammed paper if present.
3. Open top cover.
4. Remove the toner cartridge.
5. Lift the green flaps for access.
6. Remove jammed paper if present.
7. Reinstall cartridge and then close the top cover.

Troubleshooting and parts

1. Make sure that the paper guides are snug against the paper stack.
2. Make sure that the paper meets HP specifications.
3. Use the product control panel or the HP Embedded Web Server to make sure that the tray is configured for the media size and type.
4. Paper sensor associated with this message: TOP Sensor PS215. Use the Manual sensor test to test the sensor. If the sensor is not working, replace the Top sensor PCA (RM1-8617-000CN).
5. Inspect the tray separation pad and pick roller. Clean or replace if required.

13.B2.DD

Description

Paper input delay jam 1 (paper did not reach the registration sensor in time.)

Duplexer; registration or Top sensor.

Media did not reach the Top or registration sensor to print the second side of a duplex job.

Recommended action

Recovery steps

1. Remove Tray 2.
2. Use the green button to lower the duplex tray.

3. Open top cover.
4. Remove jammed paper if present.
5. Reinstall Tray 2.
6. Open top cover.
7. Remove the toner cartridge.
8. Lift the green flaps for access.
9. Remove jammed paper if present.
10. Reinstall cartridge and then close the top cover.

Troubleshooting and parts

1. Make sure that the paper meets HP specifications.
2. Use the product control panel or the HP Embedded Web Server to make sure that the tray is configured for the media size and type.
3. Make sure that paper is not blocking the duplex paper feed path. Follow the instructions displayed on the control panel to clear the paper path.
4. Paper sensor associated with this message: TOP Sensor PS215. Use the Manual sensor test to test the sensor. If the sensor is not working, replace the Top sensor PCA (RM1-8617-000CN).

13.B2.XX

Description

- **13.B2.A1**: Paper input stay jam 1 (paper remained at the registration sensor longer than legal-sized media would.)

  Tray 1; registration or Top sensor

- **13.B2.A2**, **13.B2.A3**, or **13.B2.A4**: Paper input stay jam 1 (paper remained at the registration sensor longer than legal-sized media would.)

  Tray 2; registration or Top sensor

- **13.B2.FF**: Residual paper in paper path jam 1 (paper detected in the paper path.)

  Tray 2; registration or Top sensor

- **13.B2.AD**: Paper input stay jam 1 (paper remained at the registration sensor longer than legal-sized media would.)

  Duplexer; registration or Top sensor

Recommended action

Recovery steps

1. Open top cover.
2. Remove the toner cartridge.
3. Lift the green flaps for access.
4. Remove jammed paper if present.
5. Reinstall cartridge and then close the top cover.

Troubleshooting and parts

1. Make sure that the paper guides are snug against the paper stack.
2. Make sure that the paper meets HP specifications.
3. Use the product control panel or the HP Embedded Web Server to make sure that the tray is configured for the media size and type.
4. Paper sensor associated with this message: TOP Sensor PS215. Use the Manual sensor test to test the sensor. If the sensor is not working, replace the Top sensor PCA (RM1-8617-000CN).
5. Inspect the separation pad and pick roller. Clean or replace if required.

13.B2.XX

Description

Media late to registration sensor.

- **13.B2.D3**: Paper input delay jam 1 (paper remained at the registration sensor longer than legal-sized media would.)

  Tray 3; registration or Top sensor.

- **13.B2.D4**: Paper input stay jam 1 (paper remained at the registration sensor longer than legal-sized media would.)

  Tray 4; registration or Top sensor.

Recommended action

Recovery steps

1. Remove Tray 2.
2. Remove jammed paper if present.
3. Open top cover.
4. Remove the toner cartridge.
5. Lift the green flaps for access.

6. Remove jammed paper if present.
7. Reinstall cartridge and then close the top cover.

Troubleshooting and parts

1. Check the paper path for any jammed paper. Clear the jam.
2. Make sure that the paper meets HP specifications.
3. Use the product control panel or the HP Embedded Web Server to make sure that the tray is configured for the media size and type.
4. Paper sensor associated with this message: TOP Sensor PS215. Use the Manual sensor test to test the sensor. If the sensor is not working, replace the Top sensor PCA (RM1-8617-000CN).

13.B9.FF

Description

Residual Media in Paper path jam 1 (paper detected in the paper path; fuser output.)

When the product power is turned on, paper activates the fuser output sensor and it stays on.

Recommended action

Recovery steps

1. Open the rear door to second position.
2. Open top cover.
3. Remove the toner cartridge.
4. Remove jammed paper if present.
5. Reinstall cartridge and then close the top cover.
6. Close the rear door.

Troubleshooting and parts

1. Clear the paper path of any jammed paper.
2. Make sure that the paper meets HP specifications.
3. Paper Sensor associated with this message: PS2. Use the Manual sensor test to test the sensor. If the sensor is not working, replace the fuser.

13.B9.XX

Description

13.B9.A2, **13.B9.A3**, **13.B9.A4**, **13.B9.A5**, or **13.B9.AB**

Fuser delivery stay jam 1 (paper stayed at fuser output sensor longer than it should; fuser output.)

Fuser modes

- A2–Normal fuser mode
- A3–Light 1/2 fuser mode
- A4–Heavy 1 fuser mode
- A5–Heavy 2 fuser mode
- AB-Overhead transparency fuser mode

Recommended action

Recovery steps

1. Open the rear door to second position.
2. Remove jammed paper if present.
3. Close the rear door.

Troubleshooting and parts

1. Clear the paper path of any jammed paper.
2. Make sure that the paper meets HP specifications.
3. Paper Sensor associated with this message: PS2.

13.B9.XX

Description

13.B9.D1, **13.B9.D2**, **13.B9.D3**, **13.B9.D4**, or **13.B9.DD**

Fuser delivery delay jam 1 (paper did not reach the fuser output sensor in time; fuser output.)

- D1–Tray 1
- D2–Tray 2
- D3–Tray 3
- D4–Tray 4
- DD-Duplexer

Recommended action

Recovery steps

1. Open the rear door to second position.
2. Open top cover.
3. Remove the toner cartridge.
4. Remove jammed paper if present.

5. Reinstall cartridge and then close the top cover.
6. Close the rear door.

Troubleshooting and parts

1. Remove all paper and check for residual pieces that could cause the jams.
2. Make sure that the paper meets HP specifications.
3. Paper sensor associated with this message: PS2. Use the Manual sensor test to test the sensor. If the sensor is not working, replace the fuser.
4. If the sensor is working correctly, the error only occurs on a duplex job, and the media is jammed before the fuser with only one side fused, replace the pendulum assembly (RM1-6598-000CN).

13.B9.XX

Description

13.B9.C2, **13.B9.C3**, **13.B9.C4**, **13.B9.C5**, or **13.B9.CB**

Wrap jam 1 (paper first detected at fuser output sensor and then disappears from sensor before it should; fuser output — paper is wrapped around the fuser.)

Fuser mode

- C2–Normal fuser mode
- C3–Light 1/2 fuser mode
- C4–Heavy 1 fuser mode
- C5–Heavy 2 fuser mode
- CB-Overhead transparency fuser mode

Recommended action

NOTE: Pre-printed paper, overhead transparency, and labels must meet product specifications. Make sure that labels were not previously put through a printer, and that there are no adhesive areas exposed.

Recovery steps

1. Open the rear door to second position.
2. Open top cover.
3. Remove the toner cartridge.
4. Remove jammed paper if present.
5. Reinstall cartridge and then close the top cover.
6. Close the rear door.

Troubleshooting and parts

1. Make sure that the paper meets HP specifications.
2. Make sure that the tray is configured for the media size and type. Use the product control panel to check the product configuration, and check the Print Driver (from the application that causes the error).
3. Replace the fuser.

13.BA.EE or 13.DA.EE

Description

Door open jam 1 (Door opens during print job.)

When the product power is turned on, paper remains in the paper path, triggering the duplex sensor.

- **13.BA.EE**: Toner door.
- **13.DA.EE**: Rear door.

Recommended action

Close all doors

Troubleshooting and parts

- Paper sensor associated with this message: Rear cover, PS51 (WG8-5935-000CN).
- Paper sensor associated with this message: Toner-door switch SW501 (WC4-5171-000CN).

13.D3.FF or 13.B2.FF

Description

Residual Media in Paper path jam 1 or 2 (paper detected in the paper path.)

When the product power is turned on, paper remains in the paper path, triggering the duplex sensor.

- **13.D3.FF**: Duplexer.
- **13.B2.FF**: Registration or Top sensor.

Recommended action

Recovery steps

1. Remove Tray 2.
2. Remove jammed paper if present.
3. Use the green button to lower the duplex tray.
4. Remove jammed paper if present.

5. Close the duplex tray.
6. Reinstall Tray 2.

Troubleshooting and parts

1. Make sure that there are no residual pieces of paper are in the paper path that could cause the paper to jam in this area.
2. Make sure that the media meets specification in both type and size for duplexing. Minimum paper size is 210 x 280 mm (8.27 x 11 inches)to 216 x 356 mm (8.5 x 14 inches).
3. Perform a paper sensor test and confirm correct operation of all sensors. In particular, check the Duplexer Paper Sensor in the following manner:
   a. At the start of the Paper Sensor Test, the duplexer sensor (third digit of the four in the upper left of the display) should be "0" (at the start of the test, all four digits should be "0".)
   b. Remove the cassette and release the duplexer pan, when in the pan is in its full down position, the duplexer sensor digit should be "1".
   c. If the sensor flag is manually moved, it the digit should show a "1" when the flag is in the full down position, a "0' as the flag moves to the middle position and a "1" when the flag is in the full up position.
   d. If the sensor does not respond as described above, replace the HVPS assembly (RM1-6280-000CN).
   e. If the sensor is working properly, the error only happens on a duplex job, and the media is jammed in the rear door or in the fuser with only one side printed, replace the pendulum assembly (RM1-6598-000CN).
   f. If the error persists, replace the lower paper feed guide (P/N RM1-6263-000CN).

13.D3.XX

Description

13.D3.D2, **13.D3.D3**, **13.D3.D4**, **13.D3.D5**, or **13.D3.DB**

Duplex re-feed jam 1 (paper did not reach the duplex sensor in time; duplexer.)

Fuser modes

- D2–Normal fuser mode
- D3–Light 1/2 fuser mode
- D4–Heavy 1 fuser mode
- D5–Heavy 2 fuser mode
- DB-Overhead transparency fuser mode

Recommended action

Recovery steps

1. Open the rear door to second position.
2. Remove jammed paper if present.
3. Close the rear door.

Troubleshooting and parts

1. Remove all paper and check for residual pieces that could cause the media not to move along the paper path.
2. Make sure that the paper meets HP specifications.
3. Paper sensor associated with this message: PS4. Replace the photointerrupter (WG8-5935-000CN or the top cover assembly (RM1-8516-000CN).

13.E1.XX

Description

13.E1.D2, **13.E1.D3**, **13.E1.D4**, **13.E1.D5**, or **13.E1.DB**

Fuser delivery delay jam 2 (paper did not reach the output bin full sensor in time; output bin full.)

Fuser modes

- E2–Normal fuser mode
- E3–Light 1/2 fuser mode
- E4–Heavy 1 fuser mode
- E5–Heavy 2 fuser mode
- EB-Overhead transparency fuser mode

Recommended action

Recovery steps

1. Open the rear door to second position.
2. Remove jammed paper if present.
3. Close the rear door.

Troubleshooting and parts

1. Remove all paper and check for residual pieces that could cause the media not to move along the paper path.
2. Make sure that the paper meets HP specifications.
3. Paper sensor associated with this message: PS4. Replace the photointerrupter (WG8-5935-000CN or the top cover assembly (RM1-8516-000CN).

20.00.00 Insufficient memory: <Device> To continue, touch “OK”

Description

The product has experienced a memory error. You might have tried to transfer too many fonts or macros.

Recommended action

Touch the OK button to print the transferred data. Some data might be lost. Reduce the page complexity or add product memory.

21.00.00 Page too complex To continue, touch “OK”

Description

The page decompression process was too slow for the product.

Recommended action

Touch the OK button to continue. There may be some data loss.

30.01.23 Scanner calibration failure

Description

The scanner calibration failed.

Recommended action

1. Turn the product off, then on again.
2. After the product warms up, repeat the calibration process.
3. If the error persists, replace the scanner.

30.01.36 Upgrade Error Try downloading upgrade again

Description

Scanner firmware upgrade error.

Recommended action

1. Resend the scanner firmware upgrade.
2. If the error persists, replace the scanner control board.

30.01.43 Scan memory failure To continue turn off then on

Description

A scan memory error occurred.

Recommended action

1. Turn the product off and then on.
2. Remove the formatter, and then reinstall the formatter.
3. If the error persists, replace the formatter.

30.01.YY Scanner failure To continue turn off then on

Description

- **30.01.06** (event code): Scanner fan error
- **30.01.41** (event code): Internal communication error involving the copy processor board (CPB) on the formatter
- **30.01.42** (event code): Internal communication error

Recommended action

- **30.01.06** (event code)
  1. Turn the product off and then on.
  2. Check the fan, and reconnect any loose cables.
  3. If the error persists, replace the fan or the scanner control board.
- **30.01.41** (event code)
  1. Turn the product off and then on.
  2. Reseat the formatter.
  3. If the error persists, replace the formatter.
- **30.01.42** (event code)
  1. Turn the product off and then on.
  2. Check the cables connecting the scanner control board.
  3. If this error occurs after a formatter, fax card or hard disk has been replaced, check that the formatter is fully seated and the "smiley face" is illuminated. Check the fax card for proper

seating on the formatter. If it is not properly seated, it can prevent the formatter from seating properly.

4. If the error persists, replace the scanner control board.

30.WX.YZ Scanner fan failure To continue turn off then on

Description

The product has detected a problem with the scanner. This error occurs when there is a CPB memory failure and the formatter needs to be replaced.

Recommended action

1. Turn power off then on.
2. If the error persists, replace the formatter.

31.01.47 Document feeder not detected

Description

The document feeder was not detected, and might not be ADF connected. The flatbed glass is still available for scanning.

Recommended action

Turn the product off and then on.

31.03.22 Scanner calibration failure

Description

The scanner calibration failed. This could affect scanning picture quality.

Recommended action

Remove any paper in document feeder. Turn the product off and then on.

31.13.03 Document feeder pick error

Description

The document feeder cannot pick up paper.

Recommended action

1. Open the document feeder top cover.
2. Remove all paper found.
3. Remove the remaining pages from the document feeder input tray.
4. Close the document feeder top cover.

5. Place the jammed page on top of any remaining pages, and reinsert them into the document feeder.
6. Align the paper guides with both edges on the paper.
7. Touch the Start button to continue.

Check the paper guides, check and clean the rollers and separation pad, and test the registration sensor.

If the error persists, replace pickup roller assembly, separation pad, or document feeder.

31.WX.10 Scanner failure To continue turn off then on

Description

The product has detected a scanner ADF fan error.

Recommended action

1. Turn the product off and then on.
2. If the error persists, replace the ADF fan.

31.WX.15 Jam in document feeder

Description

Originals are jammed inside the document feeder top cover.

Recommended action

1. Open the document feeder top cover.
2. Remove all paper found.
3. Rotate the green wheel to remove any additional paper.
4. Remove the remaining pages from the document feeder input tray.
5. Close the document feeder top cover.
6. Place the jammed page on top of any remaining pages, and reinsert them into the document feeder.
7. Align the paper guides with both edges of the paper.
8. Touch the Start button to continue.

33.WX.YZ Used board/disk installed

Description

An encrypted board or disk with existing data previously locked to a different product has replaced the original. If you continue, data is permanently lost.

Recommended action

- To save the data on the board or disk, turn the product off. Replace the board or disk with another board or disk.
- To delete the data on the board or disk and continue, touch the OK button.

40.00.01 USB I/O buffer overflow To continue, touch "OK"

Description

The USB buffer overflowed during a busy state.

Recommended action

1. Touch the OK button to print the transferred data. Some data might be lost.
2. Check the host configuration.

40.00.02 Embedded I/O buffer overflow To continue, touch "OK"

Description

Too much data was sent to the embedded HP Jetdirect print server. An incorrect communications protocol might be in use.

Recommended action

1. Touch the OK button to print the transferred data. Some data might be lost.
2. Check the host configuration.

40.00.03 EIO <X> buffer overflow To continue, touch "OK"

Description

The product displays this message when the EIO card in the indicated slot has overflowed its I/O buffer during a busy state.

Recommended action

Touch the OK button to continue.

40.00.04 EIO <X> bad transmission To continue, touch "OK"

Description

The product displays this message when a connection with the card in the indicated slot has been abnormally broken.

Recommended action

Touch the OK button to continue.

40.00.05 Embedded I/O bad transmission To continue, touch “OK”

Description

The product experienced a temporary printing error. The connection between the product and the EIO card in the specified slot has been broken.

Recommended action

Touch the OK button to clear the error message and continue printing.

41.03.YZ Unexpected size in Tray <X>

Description

The product detected a different paper size than expected.

Y = Size mismatch, Z = Source

- Y = 0: Detected paper is longer or shorter than expected
- Y = A: Detected paper too long
- Y = B: Detected paper too short
- Z = 1: Tray 1
- Z = 2: Tray 2
- Z = 3: Tray 3

Recommended action

1. Make sure that the tray is loaded with the correct paper size and that the sliding paper guides are correctly adjusted.
2. Use the Tray/Bin manual sensor test to verify that the tray paper switch is correctly functioning.
3. If the error persists, replace the lifter assembly.

41.03.YZ Unexpected size in Tray <X> To use another tray, touch "Options"

Description

The product detected a different paper size than expected.

Y = Size mismatch, Z = Source

- Y = 0: Detected paper is longer or shorter than expected
- Y = A: Detected paper too long
- Y = B: Detected paper too short
- Z = 1: Tray 1

- Z = 2: Tray 2
- Z = 3: Tray 3

Recommended action

1. Make sure that the tray is loaded with the correct paper size and that the sliding paper guides are correctly adjusted.
2. Use the Tray/Bin manual sensor test to verify that the tray paper switch is correctly functioning.
3. If the error persists, replace the lifter assembly.

41.05.YZ Unexpected type in Tray <X>

Description

The product detected a different paper type than expected.

Y = Expected type, Z = Detected type

- Y = 0: Unknown
- Y = 1: Normal paper
- Y = 3: LBP transparency
- Y = 4 Glossy paper
- Y = 5: Gloss film
- Y = 6: Non-assured transparency
- Y = 7: Heavy paper
- Y = 8: Light paper
- Y = 9: Rough paper
- Y = A: Extra heavy glossy paper (glossy paper 3)
- Y = B: Heavy glossy paper (glossy paper 2)
- Y = C: Heavy paper 3
- Y = D: Heavy paper 2
- Z = 1: Normal paper
- Z = 3: LBP transparency
- Z = 4: Glossy paper
- Z = 5: Gloss film
- Z = 6: Non-assured transparency
- Z = 7: Heavy paper

- Z = 8: Light paper
- Z = 9: Rough paper
- Z = A: Extra heavy glossy paper (glossy paper 3)
- Z = B: Heavy glossy paper (glossy paper 2)
- Z = C: Heavy paper 3
- Z = D: Heavy paper 2

Recommended action

1. Load the tray with the size and type of paper indicated, or use another tray if available.
2. If this message appears and the tray is loaded with the correct paper type, check the print driver settings to make sure that they match the tray type settings.
3. Clean the paper sensor.
4. If the error persists, replace the paper pickup assembly.

41.05.YZ Unexpected type in Tray <X> To use another tray, touch "Options"

Description

The product detected a different paper type than expected and another tray is available for use.

Y = Expected type, Z = Detected type

- Y = 0: Unknown
- Y = 1: Normal paper
- Y = 3: LBP transparency
- Y = 4 Glossy paper
- Y = 5: Gloss film
- Y = 6: Non-assured transparency
- Y = 7: Heavy paper
- Y = 8: Light paper
- Y = 9: Rough paper
- Y = A: Extra heavy glossy paper (glossy paper 3)
- Y = B: Heavy glossy paper (glossy paper 2)
- Y = C: Heavy paper 3
- Y = D: Heavy paper 2
- Z = 1: Normal paper

- Z = 3: LBP transparency
- Z = 4: Glossy paper
- Z = 5: Gloss film
- Z = 6: Non-assured transparency
- Z = 7: Heavy paper
- Z = 8: Light paper
- Z = 9: Rough paper
- Z = A: Extra heavy glossy paper (glossy paper 3)
- Z = B: Heavy glossy paper (glossy paper 2)
- Z = C: Heavy paper 3
- Z = D: Heavy paper 2

Recommended action

1. Load the tray with the size and type of paper indicated, or use another tray if available.
2. If this message appears and the tray is loaded with the correct paper type, check the print driver settings to make sure that they match the tray type settings.
3. Clean the paper sensor.
4. If the error persists, replace the paper pickup assembly.

41.WX.YZ Error To use another tray, touch "Options"

Description

A printer error has occurred.

WX =

- 02: Beam detected misprint error
- 06: ITB top detection error
- 07: Paper transportation error
- 08: Optional input source delay
- 09: Sub-thermistor abnormally high temperature
- 18: Scan line inclination adjustment request
- 19: T2 roller HV
- 20: Image drum HV

Y = fuser mode

- 0: Photo paper 1, Photo paper 2, Photo paper 3, Designated paper 2, Designated paper 3, or NA, typed or Autosense
- 1: Autosense (normal): special case distinguished from typed Normal
- 2: Normal, typed (not Autosense)
- 3: Light paper 1, 2, or 3, typed or Autosense
- 4: Heavy paper 1, typed or Autosense
- 5: Heavy paper 2, typed or Autosense
- 6: Heavy paper 3, typed or Autosense
- 7: Glossy paper 1, typed or Autosense
- 8: Glossy paper 2, typed or Autosense
- 9: Glossy paper 3, typed or Autosense
- A: Glossy film, typed or Autosense
- B: Transparency, typed or Autosense
- C: Label
- D: Envelope 1, Envelope 2, Envelope 3
- E: Rough (designated paper 1), typed or Autosense
- F: reserved for future fuser mode

Z = source tray

- 1: Tray 1
- 2: Tray 2
- 3: Tray 3
- D: Duplexer

Recommended action

1. To clear message, touch the OK button.
2. If the message reappears, turn the product off and then on.
3. If the error persists, replace the DC controller PCA.

47.FC.YZ Printer calibration failed To continue, touch "OK"

Description

The product is unable to access or implement one of the image pattern files.

Y = calibration type, Z = event

- **47.FC.00** (event code): Color plane registration (CPR) image not found at system initialization
- **47.FC.01** (event code): CPR store image failure
- **47.FC.02** (event code): CPR image not found
- **47.FC.03** (event code): CPR print engine execution failure
- **47.FC.10** (event code): Consecutive Dmax Dhalf image not found at system initialization
- **47.FC.11** (event code): Consecutive Dmax Dhalf store image failure
- **47.FC.12** (event code): Consecutive Dmax Dhalf image not found
- **47.FC.13** (event code): Consecutive Dmax Dhalf print engine execution failure
- **47.FC.20** (event code): Error diffusion image not found at system initialization
- **47.FC.21** (event code): Error diffusion store image failure
- **47.FC.22** (event code): Error diffusion image not found
- **47.FC.23** (event code): Error diffusion print engine execution failure
- **47.FC.30** (event code): Drum speed adjustment Image not found at system initialization
- **47.FC.31** (event code): Drum speed adjustment store image failure
- **47.FC.32** (event code): Drum speed adjustment image not found
- **47.FC.33** (event code): Drum speed adjustment print engine execution failure
- **47.FC.40** (event code): Pulse width modulation image not found at system initialization
- **47.FC.41** (event code): Pulse width modulation store image failure
- **47.FC.42** (event code): Pulse width modulation image not found
- **47.FC.43** (event code): Pulse width modulation print engine execution failure

Recommended action

1. Turn the product off and then on.
2. If the error persists, reload the firmware.

47.WX.YZ Printer calibration failed

Description

The print quality calibration failed. This message is for development and will not be seen by customers.

Recommended action

Turn the product off and then on.

49.XX.YY Error To continue turn off then on

Description

A firmware error has occurred. This error can be caused by corrupted print jobs, software applications issues, non-product specific print drivers, poor-quality USB or network cables, bad network connections or incorrect configurations, invalid firmware operations, or unsupported accessories.

Recommended action

1. Turn the product off and then on.
2. If the error persists, check the following:
    - The error might be caused by a network connectivity problem, such as a bad interface cable, a bad USB port, or an invalid network configuration setting.
    - The error might be caused by the print job, such as an invalid print driver, a problem with the software application, or a problem with the file you are printing.
    - Upgrading the product firmware might help resolve the error. See the product user guide for more information.

50.WX.YZ Fuser error To continue turn off then on

Description

The product experienced a fuser error.

- W = fuser error code
- X = fuser mode
    - 0: Photo paper 1, 2, 3, Designated paper 2, 3, or NA, typed or AutoSense
    - 1: AutoSense (Normal special case distinguished from typed Normal)
    - 2: Normal, typed (not AutoSense)
    - 3: Light paper 1, 2, or 3, typed or AutoSense
    - 4: Heavy paper 1, typed or AutoSense
    - 5: Heavy paper 2, typed or AutoSense
    - 6: Heavy paper 3, typed or AutoSense
    - 7: Glossy paper 1, typed or AutoSense
    - 8: Glossy paper 2, typed or AutoSense
    - 9: Glossy paper 3, typed or AutoSense
    - A: Glossy film, typed or AutoSense
    - B: Transparency, typed or AutoSense
    - C: Label

- D: Envelope1, Envelope2, or Envelope3
- E: Rough (designated paper 1), typed or AutoSense
- F: Reserved for future fuser mode

◦ Y = previous product sleep state

◦ Z = next product sleep state

- 0: Printing
- 1: Standby level 1 (no temperature control)
- 2: Standby level 2 (high temperature control)
- 3: Standby level 3 (middle temperature control)
- 4: Standby level 4 (low temperature control)
- 5: Middle sleep
- 6: Deep sleep
- F: Off

Recommended action

W = A: High fuser temperature 2

1. Remove and then reseat the fuser. Make sure there is no residual paper in the fuser. Make sure the product is not located in front of a vent or window where cool air may interfere with the ability of the fuser to heat up.
2. Check the product power source. Make sure the power source meets product requirements. Make sure this is the only device using the circuit.
3. Check the connector (J50) between the fuser and the product. If it is damaged, replace the fuser.
4. If this product was previously serviced, check the connector (J50) on the DC controller PCA.
5. If the error persists, replace the fuser.

W = B: High fuser temperature 3

1. Remove and then reseat the fuser. Remove any residual paper in the product.
2. Check the paper type setting using the product menus and in the print driver. Making sure that they match and are correct for the type of paper being used.
3. If this product was previously serviced, check the connector (J50) on the DC controller PCA.
4. If the error persists, replace the fuser.

W = 1, Low fuser error temperature error

1. Remove and then reseat the fuser.
2. Check the paper type setting using the product menus and in the product driver. Make sure that they match and are correct for the type of paper being used.
3. If this product was previously serviced, check the connector (J50) on the DC controller PCA.
4. If the error persists, replace the fuser.

W = 2, Fuser warm-up failure

1. Reconnect the connector (J50) between the fuser and the DC controller PCA.
2. Turn the product off. Remove the fuser, and then reinstall it.
3. Replace the fuser wire harness.
4. If the error persists, replace the fuser.

W = 3, High fuser temperature 1

1. Remove and then reseat the fuser.
2. Check the paper type setting using the product menus and in the product driver. Make sure that they match and are correct for the type of paper being used.
3. If this product was previously serviced, check the connector (J50) on the DC controller PCA.
4. If the error persists, replace the fuser.

W = 4, Fuser power supply driving circuit error

1. Remove and then reseat the fuser.
2. If this product was previously serviced, check the connector (J50) on the DC controller PCA.
3. If the error persists, replace the fuser.

W = 6, Open fuser, breaking of a heater wire

1. Check the power source. Make sure the power source meets product requirements.

NOTE: If the power source does not meet the power frequency requirement of 43 to 67Hz, the fuser temperature control does not work properly and causes this error.

2. If this product was previously serviced, check the connector (J101) on the DC controller PCA.
3. If the error persists, replace the low-voltage power supply.

W = 7, Fuser pressure-release mechanism failure

1. Remove and then reseat the fuser. Make sure there is no residual paper in the fuser.
2. Check the fuser pressure-release sensor flag. If it is damaged, replace the fuser.
3. Use the manual sensor test to verify that the fuser pressure-release sensor (PS7) is properly functioning. If it is not, replace the fuser.

4. Use the fuser pressure-release drive test in the component test to verify that the fuser motor (M2) is properly functioning. If it is not, replace the fuser motor (M2).
5. If this product was previously serviced, check the connector (J117; J123) on the DC controller PCA.
6. If the error persists, replace the fuser.

W = 8, Low fuser temperature 2

1. Remove and then reseat the fuser. Make sure there is no residual paper in the fuser. Make sure the product is not located in front of a vent or window where cool air may interfere with the ability of the fuser to heat up.
2. Check the product power source. Make sure the power source meets product requirements. Make sure this is the only device using the circuit.
3. Check the connector (J50) between the fuser and the product. If it is damaged, replace the fuser.
4. If this product was previously serviced, check the connector (J50) on the DC controller PCA.
5. If the error persists, replace the fuser.

W = 9, High fuser temperature 2

1. Remove and then reseat the fuser. Make sure there is no residual paper in the fuser. Make sure the product is not located in front of a vent or window where cool air may interfere with the ability of the fuser to heat up.
2. Check the product power source. Make sure the power source meets product requirements. Make sure this is the only device using the circuit.
3. Check the connector (J50) between the fuser and the product. If it is damaged, replace the fuser.
4. If this product was previously serviced, check the connector (J50) on the DC controller PCA.
5. If the error persists, replace the fuser.

51.00.YY Error To continue turn off then on

Description

An error with the laser/scanner assembly has occurred in the product.

- YY = 10: Beam detect error
- YY = 19: Laser malfunction
- YY = 20: Black laser scanner error

Recommended action

51.00.10

1. Turn the product off and then on.
2. Check the flat flexible cable (FFC) connections to the laser scanners.

3. Check connectors J111 and J110 at the DC controller, and check connectors J503 and J501 at the laser scanners.
4. Replace the laser scanner.

51.00.19

1. Turn the product off and then on.
2. Check the connectors on the laser scanner.
3. Replace the laser scanner.

51.00.20

1. Perform the laser scanner component tests in the Troubleshooting menu. Verify that you can hear the motor rotate.
2. If you cannot hear the motor rotate, verify that connector J1702 and J1505 are fully seated on the DC controller PCA.
3. Verify that the connector J12 on the laser/scanner assembly is securely attached.
4. If the error persists, replace the black laser scanner.

52.00.00 Error To continue turn off then on

Description

A scanner rotation error has occurred.

Recommended action

1. Turn the product off and then on.
2. Perform the laser scanner component tests in the Troubleshooting menu.
3. If the component tests showed a startup failure, reconnect the connectors of the scanner motor (J56 and J58) and the DC controller PCA (J106).
4. Replace the laser-scanner assembly.

52.00.20 Error To continue turn off then on

Description

A scanner rotation error has occurred.

Recommended action

1. Turn the product off and then on.
2. Perform the laser scanner component tests in the Troubleshooting menu.

3. If the component tests showed a startup failure, reconnect the connectors of the scanner motor (J56 and J58) and the DC controller PCA (J106).
4. Replace the laser-scanner assembly.

52.<XX>.00 Error To continue turn off then on

Description

The laser/scanner experienced a startup error.

- XX = 04 or 05: Laser/scanner motor startup error
- XX = 05: Laser/scanner rotation error

Recommended action

XX = 04

1. Perform the laser scanner component tests in the Troubleshooting menu.
2. Check the connector (J501) on the laser/scanner driver PCA and the connector (J106) on the DC controller PCA.
3. If the error persists, replace the appropriate laser/scanner.

XX = 05

1. Perform the laser scanner component tests in the Troubleshooting menu.
2. Check the connector (J50-Y/K or J503-C/M) on the laser/scanner driver PCA and the connectors (J106; J110-C/K or J111-C/M) on the DC controller PCA.
3. If the error persists, replace the appropriate laser/scanner.

54.XX.YY Error

Description

A sensor error has occurred.

Recommended action

54.00.03: Environmental sensor failure

1. Turn the product off and then on.
2. If the environment sensor has been removed or replaced check the connector (J2) on the environment sensor and the connector (J108) on the DC controller PCA.
3. If the error persists, replace the environment sensor assembly.

54.00.04: Engine temperature sensor 1 abnormality warning

1. Turn the product off and then on.

55.XX.YY DC controller error To continue turn off then on

Description

The communication link between the formatter and DC controller was lost.

- **55.00.00** (event code): Internal communication error
- **55.00.01** (event code): DC controller memory error
- **55.00.03** (event code): DC controller no engine response
- **55.00.04** (event code): DC controller communications timeout

Recommended action

1. Turn the product off and then on.
2. Perform an engine test.
3. Verify the connectors on the DC controller.
4. If the error persists, replace the DC controller.

56.00.YY Error To continue turn off then on

Description

The product experienced a communication error with the optional paper tray.

- **56.00.01** (event code): Illegal input, selected paper input tray is unavailable
- **56.00.02** (event code): Illegal output, selected paper output bin is unavailable

Recommended action

1. Turn the product off and then on.
2. Reseat the optional paper tray.
3. Check the input connectors for damage. If a connector is damaged, replace the connector.

57.00.0X Error

Description

A fan error has occurred.

Recommended action

57.00.01: Fan motor 1 malfunction

1. Turn the product off and then on. Listen for fan noise at the front lower-left corner of the product. If no noise is heard, replace the power supply fan (FM1).
2. If this part has been removed or replaced, check the connector (J119) on the DC controller PCA.
3. Measure the voltage between the connectors (J119-1 and J119-3) on the DC controller PCA immediately after the product power is turned on. If the voltage changes from 0 VDC to approximately 24 VDC, replace the fan (FM1).

57.00.02: Fan motor 2 malfunction

1. Turn the product off and then on. Listen for fan noise at the front lower-right corner of the product. If no noise is heard, replace the toner cartridge fan (FM2).
2. If this part has been removed or replace, check the connector (J26) on the toner cartridge fan, connector (J262) on the high-voltage power supply (lower), and the connector (J114) on the DC controller.
3. Measure the voltage between the connectors (J262-1 and J262-3) on the high-voltage power supply (lower) immediately after the product power is turned on. If the voltage changes from 0 VDC to approximately 24 VDC, replace the fan (FM2).

57.00.03: Fan motor 3 malfunction

1. Turn the product off and then on. Listen for fan noise at the lower back-center of the product. If no noise is heard, replace the delivery fan (FM3).
2. If this part has been removed or replace, check the connector on the intermediate connect board.
3. Measure the voltage between the connectors (J262-1 and J262-3) on the high-voltage power supply (lower) immediately after the product power is turned on. If the voltage changes from 0 VDC to approximately 24 VDC, replace the fan (FM3).

57.00.04: Fan motor 4 malfunction

1. Turn the product off and then on.

57.00.05: Fan motor 5 malfunction

1. Turn the product off and then on.

57.00.06: Fan motor 6 malfunction

1. Turn the product off and then on.

57.00.07: Fan motor 7 malfunction

1. Turn the product off and then on.

57.00.08: Fan motor 8 malfunction

1. Turn the product off and then on.

58.00.04 Error To continue turn off then on

Description

The low-voltage power supply is defective.

Recommended action

1. Turn the product off and then on.
2. Check the connector (J143) on the DC controller PCA.
3. If the error persists, replace the low voltage power supply.

59.00.00 Error To continue turn off then on

Description

A paper path malfunction error has occurred.

Recommended action

Turn the product off then on.

59.00.20 Error To continue turn off then on

Description

A motor rotation error has occurred.

Recommended action

Turn the product off and then on.

59.00.30 Error To continue turn off then on

Description

A fuser motor startup error has occurred.

Recommended action

1. Turn the product off and then on.
2. Perform the fuser motor component test in the Troubleshooting menu.
3. Reconnect the connectors J8002 and J1504 on the DC controller PCA.
4. Replace the fuser motor.

59.00.40 Error To continue turn off then on

Description

A fuser motor rotational error has occurred.

Recommended action

1. Turn the product off and then on.
2. Perform the fuser motor component test in the Troubleshooting menu.
3. Reconnect the connectors J8002 and J1504 on the DC controller PCA.
4. Replace the fuser motor.

59.00.YY Error To continue turn off then on

Description

The product experienced a printing error.

Recommended action

59.00.90 or 59.00.A0: ITB motor (M1) start up error or ITB motor (M1) abnormal rotational error

1. Remove the ITB and check for damage.
2. Use the ITB motor (M1) drive test in the component test to verify that the ITB motor is properly functioning. If it is not, replace the ITB motor assembly.
3. If the product was previously serviced, check the connectors at the ITB motor assembly and the DC controller. See the circuit diagram for details.

59.00.C0: Developer alienation motor (M10) error

1. Use the developer engagement and disengagement drive test in the component test to verify that the disengagement mechanisms are properly functioning. If they are not, replace the developer alienation motor.
2. Use the manual sensor test to verify that the developer disengagement sensor (SR11) is properly functioning. The sensor is located inside the main drive assembly and cannot be reached for testing. Disconnect the connector (J112) at the DC controller while in manual sensor test mode to verify the sensor operation. If it is not operating, replace the main drive assembly.
3. If the product was previously serviced, check the intermediate connector (J87) of the developing disengagement sensor, the connector (J112) on the DC controller PCA, the connector (J38) of the developing disengagement motor, and the connector (J261) on the high-voltage power supply D PCA.

59.00.F0: T1 alienation mechanism failure

1. Make sure that the ITB is correctly installed.
2. Use the T1 roller alienation sensor (SR9) test in the manual sensor test to verify that the sensor is properly functioning. If it is not, replace the sensor assembly.
3. Use the T1 roller engagement and disengagement drive test in the component test to verify that the T1 roller disengagement mechanism is properly functioning. If it is not, remove the ITB and

manually actuate the alienation mechanism. If it fails, replace the ITB. If the ITB is working correctly, replace the fuser drive assembly.

4. If the product was previously serviced, check the connector (J128) on the DC controller PCA.

59.05.50 Error To continue turn off then on

Description

The product experienced a drum motor startup error.

Recommended action

1. Perform the drum-motor component test in the Troubleshooting menu.
2. Use the disable toner cartridge check and run the drum motor component test with the toner cartridge removed. If the test passes, replace the toner cartridge. If the test fails, replace the drum motor.
3. If the product was previously serviced, check the connector at the drum motor assembly and the DC controller. See the circuit diagram for details.

59.05.60 Error To continue turn off then on

Description

The product experienced a drum motor rotation error.

Recommended action

1. Perform the drum-motor component test in the Troubleshooting menu.
2. Use the disable toner cartridge check and run the drum motor component test with the toner cartridge removed. If the test passes, replace the toner cartridge. If the test fails, replace the drum motor.
3. If the product was previously serviced, check the connector at the drum motor assembly and the DC controller. See the circuit diagram for details.

60.00.0Y Tray <Y> lifting error

Description

The indicated tray has not lifted into the paper feed position.

Recommended action

60.00.11: Lifter motor failure (M7)

1. Turn the product off and then on.
2. Check the connector (J141) on the DC controller PCA.
3. Check the connector (J78) on the lifter motor (M7).

4. Use the tray lifter sensor (SR9) test in the Tray/Bin manual sensor test to verify that the sensor is properly functioning. If it is not, replace the lifter drive assembly.
5. If the error persists, replace the lifter drive assembly.

62.00.00 No system To continue turn off then on

Description

The product experienced an internal system failure.

Recommended action

1. Turn the product off and then on.
2. Reload the firmware.
3. Perform a firmware upgrade.
4. If the error persists, replace the hard disk.

69.11.YY Error To continue, touch "OK"

Description

This message displays to indicate an error during a duplex operation.

Recommended action

Turn the product off and then on.

70.00.00 Error To continue turn off then on

Description

The product experienced a DC controller failure.

Recommended action

1. Turn the product off and then on.
2. If the error persists, replace the DC controller.

81.WX.00 Wireless Network Error To continue turn off then on

Description

A wireless network component on the product has failed.

Recommended action

1. Turn the product off and then on.
2. Turn the product off, reseat the wireless network component, and then turn the product on.
3. If the error persists, replace the wireless network component.

81.WX.YZ Embedded JetDirect Error To continue turn off then on

Description

The product experienced an embedded HP Jetdirect print server critical error.

- **81.01.00** (event code): EIO Networking Event <UVWXYZ>
- **81.02.00** (event code): Wireless Networking Event <UVWXYZ>
- **81.03.00** (event code): Access Point Wireless Networking Event <UVWXYZ>
- **81.04.00** (event code): Jetdirect Inside Networking Event <UVWXYZ>
- **81.06.00** (event code): Internal EIO Networking Event <UVWXYZ>
- **81.07.00** (event code): Internal Wireless Networking Event <UVWXYZ>
- **81.08.00** (event code): Internal Access Point Wireless Networking Event <UVWXYZ>
- **81.09.00** (event code): Internal Jetdirect Inside Networking Event <UVWXYZ>

Recommended action

1. Turn the product off and then on.
2. Turn the product off, reseat the EIO accessory, and then turn the product on.
3. If the error persists, replace the formatter.

81.YY.YY EIO Error To continue turn off then on

Description

An external I/O card has failed on the product.

Recommended action

1. Turn the product off and then on.
2. Turn the product off, reseat the EIO accessory, and then turn the product on.
3. If the error persists, replace the EIO card.

98.00.0X Corrupt data in X volume

Description

Data corruption has occurred in the firmware volume.

- **98.00.01 Corrupt data in firmware volume Reinstall firmware**
- **98.00.02 Corrupt data in solutions volume Re-install accessory solutions**
- **98.00.03 Corrupt data in configuration volume Re-configure the product**
- **98.00.04 Corrupt data in job data volume All job data was erased**

Recommended action

98.00.01 or 98.00.02 or 98.00.03

1. Turn the product off and then on.
2. Use the Clean disk item in the Preboot menu.
3. Reload the firmware.

98.00.04

1. Turn the product off and then on.
2. Rerun the file erase function.

<Binname> full Remove all paper from bin

Description

The specified output bin is full.

Recommended action

Empty the bin to continue printing.

A second USB wireless networking accessory has been detected

Description

This message appears on the control panel when more than one USB wireless product is attached to the product.

Recommended action

The use of more than one wireless USB product is not supported. Remove one of the wireless USB products.

Bad optional tray connection

Description

The optional tray is not connected, not connected correctly, or a connection is not working correctly.

Recommended action

1. Turn the product off.
2. Remove and reinstall the optional tray.
3. Reconnect connectors for the tray.
4. Turn the product on.

Black Cartridge low

Description

The toner cartridge is at the low condition.

Recommended action

Actual supply life remaining may vary. Consider having a replacement available to install when print quality is no longer acceptable. The supply does not need to be replaced now.

NOTE: When an HP supply has reached its approximated end of life, the HP Premium Protection Warranty ends.

Black Cartridge very low

Description

The toner cartridge has reached the very low condition.

Recommended action

Actual supply life remaining may vary. Consider having a replacement available. The supply does not need to be replaced now unless the print quality is no longer acceptable. Once an HP supply has reached the very low condition, HP's warranty on that supply has ended.

NOTE: When an HP supply has reached its approximated end of life, the HP Premium Protection Warranty ends.

Black Cartridge very low To continue, touch "OK"

Description

The toner cartridge has reached the very low condition.

Recommended action

Actual supply life remaining may vary. Consider having a replacement available. The supply does not need to be replaced now unless the print quality is no longer acceptable. Once an HP supply has reached the very low condition, HP's warranty on that supply has ended.

NOTE: When an HP supply has reached its approximated end of life, the HP Premium Protection Warranty ends.

Card slot device failure To clear touch "Clear"

Description

The specified device has failed.

Recommended action

Touch the Clear button to clear the error.

Card slot file operation failed To clear touch “Clear”

Description

A PJL file system command attempted to perform an illogical operation.

Recommended action

Touch the Clear button to clear the error.

Card slot file system is full To clear touch “Clear”

Description

A PJL file system command could not store something on the file system because the file system was full.

Recommended action

Touch the Clear button to clear the error.

Card slot is write protected To clear touch “Clear”

Description

The file system device is protected and no new files can be written to it.

Recommended action

Touch the Clear button to clear the error.

Card slot not initialized To clear touch “Clear”

Description

This file-storage component must be initialized before use.

Recommended action

Use the embedded Web server or HP Web Jetadmin to initialize the component.

Cartridge ship mode

Description

Manufacturing use only - should not be seen in field.

Recommended action

Contact HP support for steps to resolve this condition.

Chosen personality not available To continue, touch “OK”

Description

A print job requested a product language (personality) that is not available for this product. The job will not print and will be cleared from memory.

Recommended action

Print the job by using a product driver for a different print language, or add the requested language to the product (if possible). To see a list of available personalities, print a configuration page.

Clean the rollers

Description

The product has reached the roller cleaning very low count. Clean the ADF rollers to maintain image quality.

Recommended action

1. Open document feeder top cover.
2. Remove any visible lint or dust from the feed rollers and the separation pad using compressed air or a clean lint-free cloth moistened with warm water.
3. Close the document feeder top cover.
4. On the product control panel, touch the Reset button.

Cleaning disk <X>% complete Do not power off

Description

A storage device is being sanitized or cleaned.

Recommended action

Do not turn off the product. The product's functions are unavailable. The product will automatically restart when finished.

Close inner flap in duplexer

Description

The inner flap in the duplexer is open.

Recommended action

1. Open the lower right door.
2. Close the inner flap in the duplexer.
3. Close the door.

Close rear door

Description

The rear door is open.

Recommended action

1. Close the rear door.
2. If the error persists, verify the J8001 connectors is fully seated on the DC controller PCA.
3. Use the manual sensor test to verify the rear-door sensor functionality. If necessary, replace the sensor (PS8001).

Close rear door Or touch OK to print to the rear bin

Description

The rear door is open.

Recommended action

1. Close the rear door, or touch the OK button to print to the rear bin.
2. If the error persists, verify the J8001 connectors is fully seated on the DC controller PCA.
3. Use the manual sensor test to verify the rear-door sensor functionality. If necessary, replace the sensor (PS8001).

Close top cover

Description

The top cover is open.

Recommended action

1. Close the top cover.
2. Make sure that connectors FT1 and FT2 are fully seated on the cartridge door switch SW501.
3. Make sure that the tab on the cartridge door that activates the switch is not missing or damaged. Replace the cartridge-door assembly if necessary.
4. Replace the door switch (SW501).

Data received

Description

The product is waiting for more data to continue the print job.

Recommended action

Touch the OK button to print the last page of the job. To print the existing data, touch the Print button.

Digital send communication error

Description

A digital send job failed and cannot be delivered.

Recommended action

Touch the Hide button to remove this message. Try to send the job again.

Disk full Delete stored jobs

Description

The disk is out of storage space and there is not enough space to process any jobs.

Recommended action

- Touch the View Jobs option to view and delete the stored jobs.
- Touch the Print Faxes option to print and delete stored fax jobs. Sign in might be required.

The error will automatically clear when there is enough disk space to process jobs.

Disk low Delete stored jobs

Description

The disk is running out of storage space. If the user does not delete stored jobs, the disk will run out of space and there will not be enough space to process any jobs. If the storage space goes lower, an error condition will occur.

Recommended action

- Touch the View Jobs option to view and delete stored jobs.
- Touch the Print Faxes option to print and delete stored faxes. Sign in might be required.

To increase available disk space, go to Job Status to cancel scheduled jobs.

Document feeder bin full

Description

Too many pages are in the document feeder.

Recommended action

Remove excess paper from the document feeder output bin.

Document feeder is empty

Description

This message displays when the user presses the Start button and there is nothing in the ADF or on the glass and the ADF is closed.

Recommended action

Place originals in document feeder and touch the Start button.

Document Feeder Kit low

Description

The product indicates when a supply level is low.

Recommended action

Replace the document feeder kit.

Document Feeder Kit very low

Description

The product indicates when a supply level is very low.

NOTE: After an HP supply has reached the very low threshold, the HP Premium Protection Warranty for that supply has ended.

Recommended action

Replace the document feeder kit.

Document Feeder Kit very low To continue, touch “OK”

Description

The product indicates when a supply level is very low.

NOTE: After an HP supply has reached the very low threshold, the HP Premium Protection Warranty for that supply has ended.

Recommended action

Replace the document feeder kit.

Document feeder top cover open

Description

The document feeder jam access cover is open.

Recommended action

Close the cover.

EIO <X> disk not functional

Description

The EIO disk in slot indicated is not working correctly.

Recommended action

1. Turn the product off.
2. Remove the EIO disk from the slot indicated.

3. Install a new EIO disk.
4. Turn the product on.

EIO <X> disk spinning up

Description

The EIO disk product in the indicated slot is spinning up. Jobs that require disk access must wait.

- X = 1: Slot 1
- X = 2: Slot 2

Recommended action

No action is necessary.

EIO device failure To clear touch "Clear"

Description

The specified device failed.

Recommended action

Touch the Clear button to clear the message.

EIO file operation failed To clear touch "Clear"

Description

A PJL file system command attempted to perform an illogical operation.

Recommended action

Touch the Clear button to clear the message.

EIO file system is full To clear touch "Clear"

Description

A PJL file system command could not store something on the file system because the file system was full.

Recommended action

Touch the Clear button to clear the error.

EIO is write protected To clear touch "Clear"

Description

The device is protected and no new files can be written to it.

Recommended action

Touch the Clear button to clear the message.

EIO not initialized To clear touch "Clear"

Description

This file-storage component must be initialized before use.

Recommended action

Use the HP Embedded Web Server or HP Web Jetadmin to initialize the file system.

Event log is empty

Description

No product events are in the log.

Recommended action

No action is necessary.

Fax is disabled – ignoring call

Description

The product received a call, but the fax feature was not configured with the required settings (country/region, date/time, company name, fax number, etc.).

Recommended action

Configure the fax with the required settings from the Administration menu on the control panel.

Finishing process not functional

Description

The finishing device indicates it cannot perform the requested finishing action (like stapling or binding).

Recommended action

The job proceeds without the finishing action being performed.

Flatbed cover open

Description

The scanner cover has been opened to access the glass.

Recommended action

Close the scanner cover.

Fuser Kit Low

Description

The product indicates when a supply level is low.

Recommended action

Replace the fuser kit.

NOTE: After replacing the fuser kit, reset the fuser page counter by selecting the New Fuser Kit item in the Reset Supplies sub-menu.

Fuser Kit very low

Description

The product indicates when a supply level is very low.

NOTE: After an HP supply has reached the very low threshold, the HP Premium Protection Warranty for that supply has ended.

Recommended action

Replace the fuser kit.

NOTE: After replacing the fuser kit, reset the fuser page counter by selecting the New Fuser Kit item in the Reset Supplies sub-menu.

Fuser Kit very low To continue, touch "OK"

Description

The product indicates when a supply level is very low.

NOTE: After an HP supply has reached the very low threshold, the HP Premium Protection Warranty for that supply has ended.

Recommended action

Replace the fuser kit.

NOTE: After replacing the fuser kit, reset the fuser page counter by selecting the New Fuser Kit item in the Reset Supplies sub-menu.

Incompatible <supply>

Description

The indicated <supply>is not compatible with this product.

- **10.00.35** (event code): Black toner cartridge
- **10.23.35** (event code): Fuser kit

Recommended action

Replace the incompatible supply.

Incompatible supplies

Description

Toner cartridges or other supply items are installed that were not designed for this product. The product cannot print with these supplies installed.

Event codes are supply specific.

Recommended action

Touch the OK button to identify the incompatible supplies.

Replace the supplies with those that are designed for this product.

Initializing scanner, please wait

Description

The product is waiting for the scanner to initialize.

Recommended action

No action is necessary. Wait until the Ready message appears on the display.

Initializing...

Description

The product is starting.

Recommended action

No action is necessary. Wait until the Ready message appears on the display.

Install Black Cartridge

Description

A supply is either not installed or not correctly installed in the product.

Recommended action

Replace or reinstall the toner cartridge correctly to continue printing.

Install Fuser Unit

Description

The fuser is either not installed or not correctly installed in the product.

Recommended action

CAUTION: The fuser can be hot while the product is in use.

Reseat the fuser.

Install supplies

Description

More than one supply is missing or is installed incorrectly.

- **10.00.15** (event code): Black toner cartridge
- **10.23.15** (event code): Fuser kit

Recommended action

1. Touch the OK button to identify which supplies need to be replaced.
2. Touch the OK button a second time for more information about the specific supply.
3. Insert the supply item or make sure the installed supply item is fully seated.

Internal disk device failure To clear touch "Clear"

Description

The specified device has failed.

Recommended action

Touch the Clear button to clear the message.

Internal disk file operation failed To clear touch "Clear"

Description

A PJL file system command attempted to perform an illogical operation.

Recommended action

Touch the Clear button to clear the message.

Internal disk file system is full To clear touch "Clear"

Description

A PJL file system command could not store something on the file system because the file system was full.

Recommended action

Touch the Clear button to clear the error.

Internal disk is write protected To clear touch "Clear"

Description

The internal disk is protected and no new files can be written to it.

Recommended action

Touch the Clear button to clear the message.

Internal disk not found

Description

The product cannot find the hard drive.

Recommended action

Check the hard drive cable connections.

Internal disk not functional

Description

The product internal disk is not working correctly.

Recommended action

1. Turn off the product, and then remove and reinstall the disk. Turn on the product.
2. If the error persists, replace the internal hard drive.

Internal disk not initialized To clear touch “Clear”

Description

This file-storage component must be initialized before use.

Recommended action

Use the HP Embedded Web Server or HP Web Jetadmin to initialize the file system.

Internal disk spinning up

Description

Internal disk device is spinning up its platter. Jobs that require disk access must wait.

Recommended action

No action is necessary.

Load Tray 1 [Type] [Size]

Description

Tray 1 is not loaded, but there is not another tray available for the user to use instead.

Recommended action

Load the tray with the requested paper.

Load Tray 1 [Type] [Size] To continue, touch “OK”

Description

Tray 1 is empty.

Recommended action

- Load Tray 1 with the requested paper. Or, if paper is already in Tray 1, touch the OK button to print.
- If paper is in another tray, remove the paper and insert it in Tray 1, and then touch the OK button.

Load Tray <X>: [Size]

Description

This message appears even though there is paper loaded in the tray.

Recommended action

1. Load the tray with the requested paper or adjust the paper guides.
2. If the error persists, use the tray paper present sensor test in the Tray/Bin manual sensor test to verify that the sensor is correctly functioning.
3. Use the tray paper present sensor test in the Tray/Bin manual sensor test to verify that the sensor is correctly functioning.
4. Make sure that the sensor flag on the paper presence sensor is not damaged and moves freely.
5. Reconnect the corresponding connector:
   - MP tray: Connector (J85, J90) on the MP tray paper out sensor and the connector (J107) on the DC controller PCA.
   - Input tray: Connectors (J6) on the tray paper out sensor and the connector (J131) on the DC controller PCA.
   - 1 X 500-sheet paper tray: Connector (J55D) on the paper tray paper out sensor and the connector (J106) on the paper feeder controller PCA.

Load Tray <X>: [Size] To continue, touch "OK"

Description

This message appears when the indicated tray is selected but is not loaded, and other paper trays are available for use. It also appears when the tray is configured for a different paper type or size than the print job requires.

Recommended action

1. Load the correct paper in the tray.
2. If prompted, confirm the size and type of paper loaded.
3. Otherwise, touch the OK button to select another tray.

Load Tray <X>: [Size] To use another tray, touch "Options"

Description

This message appears when the indicated tray is selected but is not loaded, and other paper trays are available for use. It also appears when the tray is configured for a different paper type or size than the print job requires.

Recommended action

1. Load the correct paper in the tray.
2. If prompted, confirm the size and type of paper loaded.
3. Otherwise, touch the OK button to select another tray.

Load Tray <X>: [Type], [Size]

Description

This message appears even though there is paper loaded in the tray.

Recommended action

1. Load the tray with the requested paper or adjust the paper guides.
2. If the error persists, use the tray paper present sensor test in the Tray/Bin manual sensor test to verify that the sensor is correctly functioning.
3. Make sure that the sensor flag on the paper presence sensor is not damaged and moves freely.
4. Reconnect the corresponding connector:
   - MP tray: Connector (J85, J90) on the MP tray paper out sensor and the connector (J107) on the DC controller PCA.
   - Input tray: Connectors (J6) on the tray paper out sensor and the connector (J131) on the DC controller PCA.
   - 1 X 500-sheet paper feeder tray: Connector (J55D) on the paper feeder tray paper out sensor and the connector (J106) on the paper feeder controller PCA.

Load Tray <X>: [Type], [Size] To use another tray, touch "Options"

Description

This message appears when the indicated tray is selected but is not loaded, and other paper trays are available for use. It also appears when the tray is configured for a different paper type or size than the print job requires.

Recommended action

1. Load the correct paper in the tray.
2. If prompted, confirm the size and type of paper loaded.
3. Otherwise, touch the OK button to select another tray.

Manually feed output stack Then touch "OK" to print second sides

Description

The product has printed the first side of a manual duplex job and is waiting for the user to insert the output stack to print the second side.

Recommended action

The even-numbered pages of the two-sided document have printed. Follow the next steps to print the odd-numbered pages.

1. Maintaining the same orientation, remove the document from the output bin. Do not discard blank pages.
2. Flip the document over so the printed side is up.
3. Load document in Tray 1.
4. Touch the OK button to print the second side of the job.

Manually feed: [Size]

Description

This message appears when manual feed is selected, Tray 1 is not loaded.

Recommended action

Load tray with requested paper.

Manually feed: [Size] To continue, touch “OK”

Description

This message appears when manual feed is selected, Tray 1 is not loaded, and other trays are available.

Recommended action

- Load tray with requested paper.
- If paper is already in tray, touch the Help button to exit the message and then touch the OK button to print.
- To use another tray, clear paper from Tray 1, touch the Help button to exit the message and then touch the OK button.

Manually feed: [Size] To use another tray, touch "Options"

Description

This message appears when manual feed is selected, Tray 1 is not loaded, and other trays are available.

Recommended action

- Load tray with requested paper.
- To use another tray, clear paper from Tray 1, touch Options to select a different tray.

Manually feed: [Type], [Size] To continue, touch “OK”

Description

This message appears when manual feed is selected, Tray 1 is not loaded, and other trays are available.

Recommended action

- Load tray with requested paper.
- If paper is already in tray, touch the Help button to exit the message and then touch the OK button to print.
- To use another tray, clear paper from Tray 1, touch the Help button to exit the message and then touch the OK button.

Manually feed: [Type], [Size] To use another tray, touch "Options"

Description

This message appears when manual feed is selected, Tray 1 is not loaded, and other trays are available.

Recommended action

- Load tray with requested paper.
- To use another tray, clear paper from Tray 1, touch Options to select a different tray.

No job to cancel

Description

You have pressed the stop button but the product is not actively processing any jobs.

Recommended action

No action necessary.

Open rear door

Description

The paper type for the current print job requires a straighter paper path.

Recommended action

Open the rear door.

Output Bin full

Description

The output bin is full and must be emptied for printing to continue.

Recommended action

1. Empty the bin to continue printing.
2. Make sure that the paper full sensor flag is not damaged and can freely move. If the sensor flag is damaged, replace the top-cover assembly.
3. Make sure that the connector J4 on is fully seated on the sensor and connector J1605 is fully seated on the DC controller.
4. Use the manual sensor test to test the sensor functionality. If necessary, replace the sensor (PS1).

Paperless mode

Description

This is a test mode used in manufacturing and should not be seen on a normally operating product.

Recommended action

Contact HP support for steps to resolve this condition.

Printing Engine Test...

Description

The product is printing an engine test page.

Recommended action

No action is necessary.

Printing stopped To continue, touch "OK"

Description

Time has expired on the Print/Stop test.

Recommended action

Touch the OK button to continue.

Processing digital send job

Description

This message is displayed after the user sends an e-mail or fax.

Recommended action

No action is needed.

RAM Disk device failure To clear touch “Clear”

Description

The specified device failed.

Recommended action

Touch the Clear button to clear the message.

RAM Disk file operation failed To clear touch “Clear”

Description

A PJL file system command attempted to perform an illogical operation.

Recommended action

Touch the Clear button to clear the message.

RAM Disk file system is full To clear touch “Clear”

Description

A PJL file system command could not store something on the file system because the file system was full.

Recommended action

Touch the Clear button to clear the error.

RAM Disk is write protected To clear touch “Clear”

Description

The product is protected and no new files can be written to it.

Recommended action

Touch the OK button to clear the message.

RAM Disk not initialized To clear touch “Clear”

Description

The RAM disk file system must be initialized before it can be used.

Recommended action

Use the HP Embedded Web Server or HP Web Jetadmin to initialize the file system.

Remove cartridge lock

Description

The product has been turned on with a cartridge shipping lock installed on the toner cartridge.

Recommended action

1. Open the top cover and remove the toner cartridge.
2. Pull the orange tab to remove the strip.
3. Remove the paper with the plastic insert.
4. Reinstall cartridge, and then close the top cover.

Remove the toner cartridge

Description

The product is component testing the belt.

Recommended action

- To perform the test, remove the toner cartridge.
- To cancel the test, touch the Stop button.

Replace Black Cartridge

Description

The black cartridge has reached the out condition.

Recommended action

Install a new toner cartridge.

Replace Document Feeder Kit

Description

The document feeder kit is very low.

Recommended action

Install a new document feeder roller assembly and a separation pad assembly.

Replace Fuser Kit

Description

The product indicates when the fuser kit is at its estimated end of life. The actual life remaining might be different than the estimation. Have a replacement fuser kit available to install when print quality is no longer acceptable.

The fuser kit does not need to be replaced now unless the print quality is no longer acceptable.

NOTE: After the fuser kit reaches its approximated end of life, the HP Premium Protection Warranty on that fuser kit ends.

Recommended action

Replace the fuser kit.

WARNING! The fuser can be hot while the product is in use.

Replace staple cartridge

Description

The staple cartridge is empty.

Recommended action

Replace the staple cartridge located in the stapler/stacker.

Replace supplies

Description

This alert appears only if the product is configured to stop when a supplies reach the very low threshold. Two or more supplies have reached the estimated end of life. The product indicates when a supply level is at its estimated end of life. The actual life remaining might be different than estimated.

The supply does not need to be replaced now unless the print quality is no longer acceptable.

HP recommends that the customer have a replacement supply available to install when print quality is no longer acceptable.

NOTE: When an HP supply has reached its approximated end of life, the HP Premium Protection Warranty on that supply ends.

Recorded event codes depend on which supplies are at the end of life.

- **10.00.70** (event code): Black toner cartridge
- **10.23.70** (event code): Fuser kit
- **10.22.70** (event code): Transfer kit

Recommended action

- Touch the OK button to find out which supplies need to be replaced.
- Configure the product to continue printing by using the Manage Supplies menu.

Roller cleaning is recommended

Description

The product has reached the roller cleaning low count. Clean the ADF rollers to maintain image quality.

Recommended action

1. Open document feeder top cover.
2. Remove any visible lint or dust from the feed rollers and the separation pad using compressed air or a clean lint-free cloth moistened with warm water.
3. Close the document feeder top cover.
4. On the product control panel, touch the Reset button.

ROM disk device failed To clear touch "Clear"

Description

The specified device failed.

Recommended action

Touch the Clear button to clear the message.

ROM disk file operation failed To clear touch "Clear"

Description

A PJL file system command attempted to perform an illogical operation.

Recommended action

Touch the Clear button to clear the message.

ROM disk file system is full To clear touch "Clear"

Description

A PJL file system command could not store something on the file system because the file system was full.

Recommended action

Touch the Clear button to clear the error.

ROM disk is write protected To clear touch "Clear"

Description

The device is protected and no new files can be written to it.

Recommended action

Touch the Clear button to clear the message.

ROM disk not initialized To clear touch "Clear"

Description

The ROM disk file system must be initialized before it can be used.

Recommended action

Use the HP Embedded Web Server or HP Web Jetadmin to initialize the file system.

Size mismatch in Tray <X>

Description

The paper in the listed tray does not match the size specified for that tray.

Recommended action

1. Load the correct paper.
2. Verify that the paper is positioned correctly.
3. Close the tray and verify that the control panel lists the correct paper size and type. Reconfigure the size and type if necessary.
4. If necessary, use the control-panel menus to reconfigure the size and type settings for the specified tray.
5. Make sure that connectors J513, J507, and J501 are fully seated on the high-voltage power supply.
6. Make sure that connector J601 is fully seated on the DC controller PCA.
7. If the error persists, replace the high-voltage power supply.
8. If the error persists, replace the DC controller PCA.

Standard bin full Remove all paper from bin

Description

The specified output bin is full and must be emptied for printing to continue.

Recommended action

Empty the specified output bin.

Staple Cartridge low

Description

The product indicates when a supply level is low.

Recommended action

Replace the staple cartridge.

Staple Cartridge very low To continue, touch “OK”

Description

The product indicates when a supply level is very low.

NOTE: After an HP supply has reached the very low threshold, the HP Premium Protection Warranty for that supply has ended.

Recommended action

Replace the staple cartridge.

Supplies low

Description

Multiple supplies on the product have reached the low threshold.

Recommended action

Replace the supply when print quality is no longer acceptable.

NOTE: When an HP supply has reached its approximated end of life, the HP Premium Protection Warranty ends.

Supplies very low To continue, touch "OK"

Description

More than one color supply on the product has reached the very low condition.

Recommended action

- Replace the supply when print quality is no longer acceptable.
- To continue printing in color, either replace the supply or reconfigure the product by using the Manage Supplies menu on the control panel.

NOTE: When an HP supply has reached its approximated end of life, the HP Premium Protection Warranty ends.

Supply memory warning

Description

Unable to read cartridge data.

NOTE: Any repair required as a result of using cartridges with unreadable cartridge data is not covered under warranty.

Recommended action

Replace the cartridge with a genuine HP toner cartridge.

Tray <X> empty: [Size]

Description

The specified tray is empty and needs to be loaded.

Recommended action

Refill the tray.

NOTE: This could be a false message. If the tray is loaded without removing the shipping lock, the product does not sense that the paper is loaded. Remove the shipping lock and then load the tray.

Tray <X> empty: [Type], [Size]

Description

The specified tray is empty and needs to be loaded, but the current job does not need this tray to print.

Recommended action

Refill the tray at a convenient time.

NOTE: This could be a false message. If the tray is loaded without removing the shipping lock, the product does not sense that the paper is loaded. Remove the shipping lock and then load the tray.

Tray <X> open

Description

The specified tray is open or not closed completely.

Recommended action

1. Close the tray.
2. If this message appears and the lifter-base assembly was removed or replaced, make sure that the connector on the assembly is correctly connected and fully seated.
3. If the error persists, use the paper size switches (SW2,3 - SW82,83 - SW92,93) test in the Tray/Bin manual sensor test to test the switches. If they do not respond, replace associated the lifter drive assembly.

Tray <X> overfilled Remove excess paper

Description

A tray in the product is overfilled with paper. Printing can continue from a different tray.

Recommended action

Remove enough paper so that the paper stack does not exceed the limit for the tray.

NOTE: If this message appears and the paper-pickup assembly was removed or replaced, make sure that the connector at the back of the assembly is correctly connected and fully seated.

Tray <X> overfilled To use another tray, touch "Options"

Description

Too much paper was loaded into the indicated tray.

Recommended action

Remove enough paper so that the paper stack does not exceed the limit for the tray or touch the OK button to use another tray.

NOTE: If this message appears after lifter drive assembly was removed or replaced, make sure that the connector on the assembly is correctly connected and fully seated.

Type mismatch Tray <X>

Description

The specified tray contains a paper type that does not match the configured type.

Recommended action

The specified tray will not be used until this condition is addressed. Printing can continue from other trays.

1. Load the correct paper in the specified tray.
2. At the control panel, verify the type configuration.

Unable to cancel firmware update job

Description

The product is processing of downloading a remote firmware upgrade and cannot cancel it.

Recommended action

Firmware updates cannot be canceled once started. The product will restart automatically to complete the firmware update.

Unable to install the firmware

Description

The product displays this message when one of the following conditions occurs during a firmware upgrade.

- A file I/O error occurs when there is an interruption while reading the firmware upgrade file.
- A firmware installation is already in progress, possibly by a remote service application.
- A firmware installation is pending.
- An internal system failure has occurred while doing firmware upgrades.
- An unknown error occurs while doing firmware upgrades.
- The memory is full when the user is doing firmware upgrades.
- The firmware upgrade file does not support this product.
- The upgrade file is invalid or corrupted while doing firmware upgrades.

Recommended action

Refer to the walk-up help for each of these error conditions for specific instructions on resolving the error.

Unsupported drive installed

Description

A non-supported hard drive has been installed. The drive is unusable by this product.

Recommended action

Replace the unsupported drive.

Unsupported supply in use

Description

A non-supported supply has been installed.

Or, the toner cartridge is for a different HP product.

- **10.00.41** (event code): Black toner cartridge

Recommended action

Install the correct supplies for this product. See the parts chapter in the service manual for supply part numbers.

Unsupported supply installed

Description

The product has one or more HP genuine supplies, designed for a different product, installed. The product will either shut down or slow down unless the user acknowledges the condition.

Recommended action

Touch the OK button to continue.

Unsupported supply installed To continue, touch “OK”

Description

One or more genuine HP supplies designed for a different product are installed. These supplies are not supported by the product. The product may either shut down or slow down.

Recommended action

The installed supply was not designed for this product and is not supported. Results may vary when used with this product. To continue printing with the unsupported supply touch the OK button.

Unsupported tray configuration

Description

More than the allowable tray accessories are installed on the product. Printing cannot continue until the extra trays are removed and the product is turned off and then on.

Recommended action

Turn product off and remove the excess tray accessories. Turn the product on.

Unsupported USB accessory detected Remove USB accessory

Description

A non-supported USB accessory has been installed.

Recommended action

Turn the product off, remove the USB accessory, and then turn the product on.

Upgrade complete To continue turn off then on

Description

The firmware upgrade is complete.

Recommended action

Turn the product off and then on.

USB accessory needs too much power Remove USB and turn off then on

Description

A USB accessory is drawing too much electrical current. Printing cannot continue.

Recommended action

Remove the USB accessory, and then turn the product off and then on.

Use a USB accessory that uses less power or that contains its own power supply.

USB accessory not functional

Description

A USB accessory is not working correctly.

Recommended action

1. Turn the product off.
2. Remove the USB accessory.
3. Insert a replacement USB accessory.

USB hubs are not fully supported Some operations may not work properly

Description

Some USB hubs require more power than the product has available.

Recommended action

Remove the USB hub.

USB is write protected To clear touch "Clear"

Description

The device is protected and no new files can be written to it.

Recommended action

Touch the Clear button to clear the message.

USB not initialized To clear touch "Clear"

Description

The USB device file system must be initialized before it can be used.

Recommended action

Use the embedded Web server or HP Web Jetadmin to initialize the component.

USB storage accessory removed Clearing any associated data

Description

This message displays for six seconds after removal of the USB storage accessory.

Recommended action

Touch the Hide button to remove this message.

USB storage device failure To clear touch "Clear"

Description

The specified device failed.

Recommended action

Touch the Clear button to clear the message.

USB storage file operation failed To clear touch "Clear"

Description

A PJL file system command attempted to perform an illogical operation.

Recommended action

Touch the Clear button to clear the message.

USB storage file system is full To clear touch "Clear"

Description

A PJL file system command could not store something on the file system because the file system was full.

Recommended action

Touch the Clear button to clear the error.

Used supply in use

Description

One or more used supplies have been installed.

Recommended action

- Install new supplies.
- If you believe you purchased a genuine HP supply, go to www.hp.com/go/anticounterfeit. Any repair required as a result of using used cartridges is not covered under warranty. Supply status and features depending on supply status are not available.

Used supply installed To continue, touch "OK"

Description

The product displays this message when a used supply (a remanufactured or refilled genuine HP or non-HP product) has been installed.

- **10.00.34** (event code): Black toner cartridge

Recommended action

- Install new supplies.
- If you believe you purchased a genuine HP supply, go to www.hp.com/go/anticounterfeit. Any repair required as a result of using used cartridges is not covered under warranty. Supply status and features depending on supply status are not available.

Warming up scanner

Description

The scanner is warming up.

Recommended action

The product will enter the ready state when it is finished warming up.

Wireless Configuration Mode

Description

A USB wireless networking accessory was installed and is ready for configuration.

Recommended action

HP recommends using a computer and internet browser to configure this accessory. Enter the IP address into an internet browser to access the full range of configuration options. After wireless functionality has been configured and the changes have been applied, turn the product off and then on to exit the Wireless Configuration Mode.

Wireless is not configured

Description

A USB wireless networking accessory was attached to the product and was not configured.

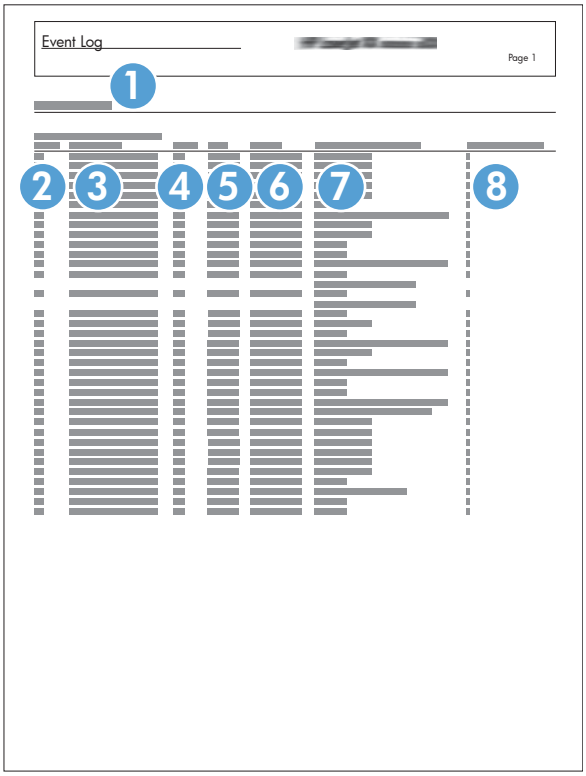
Recommended action

To begin configuration, turn the product off and then on. The product will restart in the Wireless Configuration Mode.

Event log messages

These messages appear only in the event log. For additional numeric messages, see the control-panel message section of this manual.

Figure 2-35 Sample event log



1	Product information
2	Event number
3	Date and time
4	Engine cycles
5	Event log code
6	Firmware version number
7	Description of personality
8	Consecutive Repeats

Print or view an event log

NOTE: The event log in using the Administration menu shows only a subset of events. For a complete event log, use the Service menu.

Print or view the event log from the Administration menu

1. From the Home screen on the product control panel, scroll to and touch the Administration button.
2. Open the following menus:
   - Troubleshooting
   - Event Log
3. The event log displays on the screen. To print it, touch the Print button.

Print or view the event log from the Service menu

1. From the Home screen on the product control panel, scroll to and touch the Device Maintenance button.
2. Open the Service menu.
3. On the sign-in screen, select the Service Access Code option from the drop-down list.
4. Enter the following service access code for this product: 05057512.
5. Open the Event Log menu.
6. The event log displays on the screen. To print it, touch the Print button.

Clear an event log

1. From the Home screen on the product control panel, scroll to and touch the Device Maintenance button.
2. Open the Service menu.
3. On the sign-in screen, select the Service Access Code option from the drop-down list.
4. Enter the following service access code for this product: 05057512.
5. Open the Event Log menu.
6. Select the Clear Event Log item, and then touch the OK button.

Event log message table

General paper jam guidelines

For jams of any type, check the following:

- Clear the jam. See the Clear jams section of the product service manual.
- Make sure that the paper guides are correctly positioned against the paper.
- Verify the paper meets the product specifications.
- Use the control panel or the HP Embedded Web Server to make sure that the tray is configured properly.

Event log message	Description	Action
30.01.08	The flatbed optical assembly cannot find the origin notch.	This is an informational message, and no action is required. If the flatbed optical assembly cannot find the origin notch on the flatbed scanner, the scanned image might be offset on the copied page. The image displacement will be less then 1 mm or pixel off.
30.01.41	The formatter lost connections with the scanner control board or communication was corrupted.	1. Turn the product off and then on. 2. Reseat the formatter. 3. Upgrade the firmware. 4. Verify that the PCI express cable is connected to the product and to the interconnect board/formatter and scanner control board. 5. Verify the scanner control board has power. 6. Replace the scanner control board. 7. Replace the formatter. 8. Replace the interconnect board. 9. Replace the whole unit.
30.01.43	Copy processor board memory check failure during the initial memory check. The copy processor board resides on the scanner control board or formatter depending on the product.	1. Turn the product off and then on. 2. Replace the scanner control board. 3. Replace the formatter.
30.01.44	Scanner firmware error	1. Turn the product off and then on. 2. Replace the scanner control board. 3. Replace the formatter.

Event log message	Description	Action
30.01.45	General code assert error for the copy processor board firmware.	1. Turn the product off and then on. 2. Upgrade the firmware. 3. Replace the scanner control board. 4. Replace the scanner assembly.
30.01.46	The firmware cannot find the copy processor board.	1. Reseat the formatter. 2. Replace the scanner control board or formatter depending on where copy processor board is located.
30.03.14	Non-fatal error	This is an informational message, and no action is required.
30.03.20	The copy processor board firmware cannot communicate with the PCA on the optical assembly.	1. Turn the product off and then on. 2. Verify the FFC cables between scanner and scanner control board or formatter depending on product are connected. 3. Replace the scanner.
30.03.22	The scan module cannot see the illumination module, or marginal illumination. The optical assembly is not parked under the calibration strip.	1. Turn the product off and then on. 2. Upgrade the firmware. 3. Check the service event log for other scanner errors, and resolve those errors. 4. Check the scan module FFC connection. 5. Replace the scanner.
30.03.23	The calibration stitching label shifted or there are bad sensors in the scan module.	1. Turn the product off and then on. 2. Upgrade the firmware. 3. Replace the scanner.
30.03.30	The scanner control board cannot communicate with the flatbed scanner motor.	1. Turn the product off and then on. As the product turns on, verify the scan head moves. 2. Verify the drive belt is in the correct position. 3. Check for a red LED illuminated on the scanner motor. 4. Check the cable connection to scanner control board or formatter. 5. Replace the scanner. 6. Replace the scanner control board.

Event log message	Description	Action
30.03.45	The PCA firmware code controls the motor	1. Turn the product off and then on. 2. Upgrade the firmware. 3. Replace the scanner control board. 4. Replace the scanner assembly.
31.01.47	ADF was not detected. Cable not attached.	1. Turn the product off and then on. 2. Upgrade the firmware. 3. Check the cables between the ADF and scanner control board or formatter depending on the product. 4. Replace the ADF. 5. Replace the scanner control board or formatter depending on product.
31.03.30	ADF pick motor is not turning.	1. Verify the paper meets the product specifications. 2. Make sure the input tray is not overloaded. 3. Check the event log for ADF errors, and resolve any errors first. 4. Open and close the top cover to see if the pick motor turns without posting this error. If the motor turns, then the motor is good. 5. Verify the motor cables are connected. 6. Reseat ADF to scanner control board or formatter cables. 7. Replace the ADF.
31.03.31	ADF feed motor is not turning.	1. Verify the paper meets the product specifications. 2. Make sure the input tray is not overloaded. 3. Check the event log for ADF errors, and resolve any errors first. 4. Verify the motor cables are connected. 5. Reseat ADF to scanner control board or formatter cables. 6. Replace the ADF.

Event log message	Description	Action
31.03.32	ADF deskew motor is not turning.	1. Verify the paper meets the product specifications. 2. Make sure the input tray is not overloaded. 3. Check the event log for ADF errors, and resolve any errors first. 4. Verify the motor cables are connected. 5. Reseat ADF to scanner control board or formatter cables. 6. Replace the ADF.
31.13.01	Paper pick was initiated, but the page didn't make it to the pick success sensor.	1. Open the ADF lid, pull sheets back into input tray, and resume the job. 2. Check the paper guides and make sure they are set to the correct paper width. 3. Make sure the input tray is not overloaded. 4. Check the ADF page count for roller life. 5. Verify the paper meets the product specifications. 6. Make sure the bogie door is completely closed. 7. Check the event log for 31.03.30 errors, and resolve those errors first. 8. Clean the ADF roller. 9. Install a ADF maintenance kit.
31.13.02	The paper passed the pick success sensor and then jammed in the ADF paper path.	1. Clear the paper path and try feeding the page again. 2. Verify the paper meets the product specifications. 3. Check the paper guides and make sure they are set to the correct paper width. 4. Verify the paper path is clear. 5. Check for motor stall 31.03.31 and 31.03.32 errors. 6. Replace the ADF.

Event log message	Description	Action
31.13.13	The ADF jam access door is open.	1. Verify the jam access cover is closed. 2. Try feeding the paper again. 3. Verify the flag is not broken off. 4. With a piece of paper, check that the photo sensor is working. 5. Replace the ADF.
31.13.14	This is a feed jam in the ADF, and the motor is not turning.	1. Verify the paper meets the product specifications. 2. Make sure the ADF input tray is not overloaded. 3. Check the event log for ADF errors, and resolve any errors first. 4. Open and close the top cover to see if the pick motor turns without posting this error. If there is no error, then the motor is good. 5. Verify the motor cables are connected. 6. Reseat the ADF to scanner control board or formatter cables. 7. Replace the ADF.
31.13.15	This is a duplex refeed jam in ADF. The paper jam occurs on the back-side copy. The duplex refeed does not make it to the deskew sensor.	1. Remove the jammed paper. 2. Verify there is nothing in the paper path of the duplex refeed area. 3. Retry the copy job. 4. Replace the ADF.
99.00.01	Remote firmware upgrade (.bdl) was not performed. The file is corrupt.	The firmware file is corrupt. Download the firmware file and attempt the upgrade again.
99.00.02	Remote firmware upgrade (.bdl) was not performed. Timeout during receipt.	The IO timed out during the firmware download. The most common cause is an issue with the network environment. Ensure a good connection to the product, and attempt the upgrade again or upgrade using the USB walk-up port.
99.00.03	Remote firmware upgrade (.bdl) was not performed. An error occurred when writing to the hard disk.	1. Download the firmware again. 2. If the error persists, perform the clean disk/format disk process. 3. Download the firmware from the Preboot menu. 4. If the error persists, replace the hard disk.

Event log message	Description	Action
99.00.04 99.00.05	Remote firmware upgrade (.bdl) was not performed. There was a timeout during the download.	The I/O timed out during the firmware download. The most common cause is an issue with the network environment. Ensure there is a good connection to the product, and attempt the firmware upgrade again or upgrade the firmware using the USB walk-up port.
99.00.06 99.00.07 99.00.08	Remote firmware upgrade (.bdl) was not performed. There was an error reading the firmware file.	1. Download the firmware again. 2. If the error persists, perform the clean disk/format disk process. 3. Download the firmware from the Preboot menu. 4. If the error persists, replace the hard disk.
99.00.09 99.00.10	The firmware upgrade was canceled by the user.	Resend the firmware upgrade to the product.
99.00.11	The preboot partition is full.	1. Download the firmware again. 2. If the error persists, perform the clean disk/format disk process. 3. Download the firmware from the Preboot menu.
99.00.12	Remote firmware upgrade (.bdl) was not performed. An invalid file was sent.	The firmware file sent was not the correct file. Download the firmware file again, making sure to download the file for the correct product model. Attempt the upgrade again.
99.00.13 99.00.14	Remote firmware upgrade (.bdl) was not performed. An invalid file was sent.	The firmware file sent was not the correct file. Download the firmware file again, making sure to download the file for the correct product model. Attempt the upgrade again.
99.00.20	The bundle is not for this product.	Download the firmware file again, and attempt the upgrade again.
99.00.21	The bundle is not signed with the correct signature, or the signature is invalid.	
99.00.22	The bundle header version is not supported by this firmware.	
99.00.23	The package header version is not supported by this firmware.	
99.00.24 99.00.25 99.00.26	The format of the firmware bundle not correct.	

Clear jams

Auto-navigation for clearing jams

The auto-navigation feature assists you in clearing jams by providing step-by-step instructions on the product control panel. When you complete a step, the product displays instructions for the next step until you have completed all steps in the procedure.

Common causes of jams

Many jams are caused by using paper that does not meet HP specifications. For complete paper specifications for all HP LaserJet products, see the *HP LaserJet Printer Family Print Media Guide*. This guide is available at www.hp.com/support/ljpaperguide.

The product is jammed.

Cause	Solution
The paper does not meet specifications.	Use only paper that meets HP specifications. See the product user guide.
A component is installed incorrectly.	Verify that all components are correctly installed.
You are using paper that has already passed through a product or copier.	Do not use paper that has been previously printed on or copied.
A tray is loaded incorrectly.	Remove any excess paper from the tray. Make sure that the stack is below the maximum stack height mark in the tray. See the product user guide.
The ADF jam-access door is not completely closed.	Press on the ADF jam-access door until it clicks to make sure that it is closed.
The paper is skewed.	The tray guides are not adjusted correctly. Adjust them so they hold the stack firmly in place without bending it.
The paper is binding or sticking together.	Remove the paper, flex it, rotate it 180°, or flip it over. Reload the paper into the tray. **NOTE:** Do not fan paper. Fanning can create static electricity, which can cause paper to stick together.
The paper is removed before it settles into the output bin.	Reset the product. Wait until the page completely settles in the output bin before removing it.
During two-sided printing, you removed the paper before the second side of the document was printed.	Reset the product and print the document again. Wait until the page completely settles in the output bin before removing it.
The paper is in poor condition.	Replace the paper.
The internal rollers from the tray are not picking up the paper.	Remove the top sheet of paper. If the paper is too heavy, it might not be picked from the tray.
The paper has rough or jagged edges.	Replace the paper.
The paper is perforated or embossed.	Perforated or embossed paper does not separate easily. Feed single sheets from Tray 1.

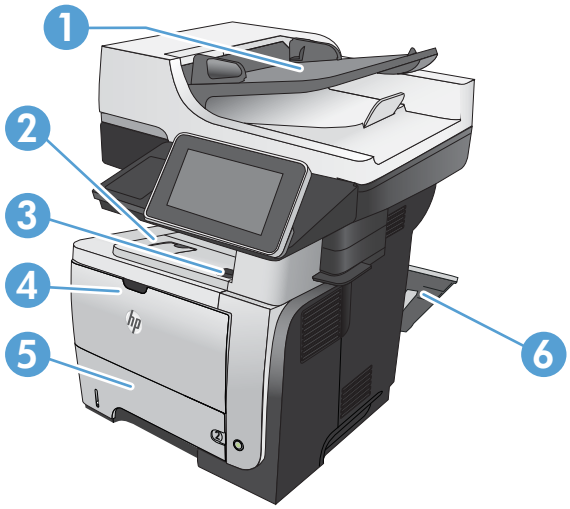
The product is jammed.

Cause	Solution
Product supply items have reached the end of their useful life.	Check the product control panel for messages alerting you of supplies status, or print a supplies status page (see the product user guide) to verify the remaining life of the supplies.
Paper was not stored correctly.	Replace the paper in the trays. Paper should be stored in the original packaging in a controlled environment.

Jam locations

Use this illustration to identify locations of jams. In addition, instructions appear on the product control panel to direct you to the location of jammed paper and on how to clear it.

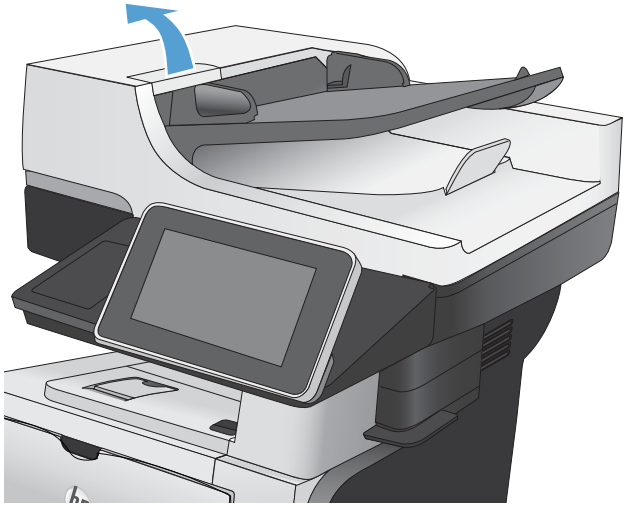
NOTE: Internal areas of the product that might need to be opened to clear jams have green handles or green labels.



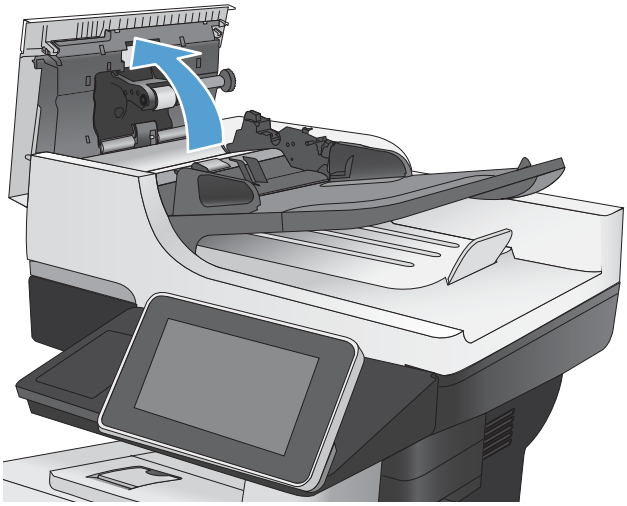
1	Document-feeder area
2	Output-bin area
3	Top-cover and toner-cartridge area
4	Tray 1 area
5	Tray 2 pickup area Duplexing area (remove Tray 2 for access)
6	Rear door area

Clear jams in the document feeder

1. Lift the latch to release the document-feeder cover.

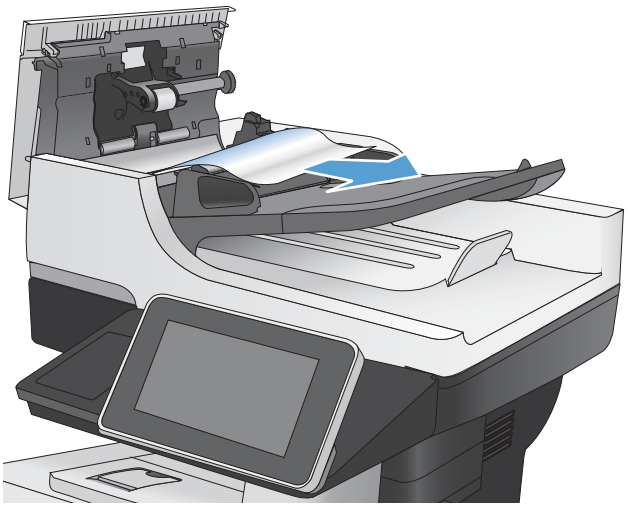


2. Open the document-feeder cover.



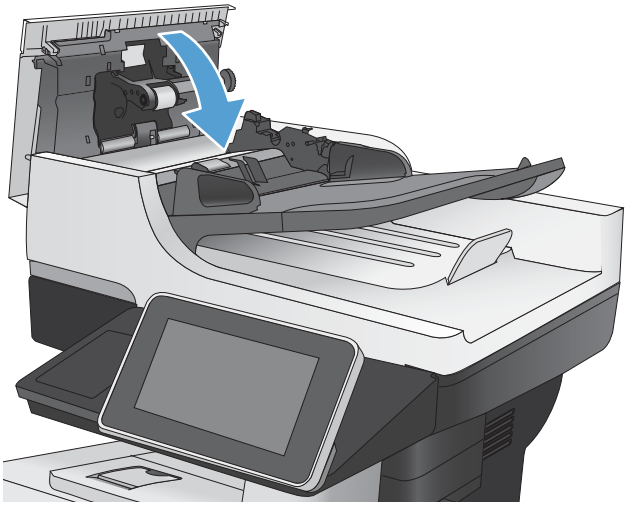
3. Lift the jam-access door, and remove any jammed paper.

   If necessary, rotate the green wheel at the front of the document feeder to remove jammed paper.



4. Close the document feeder.

   Close the document-feeder cover.



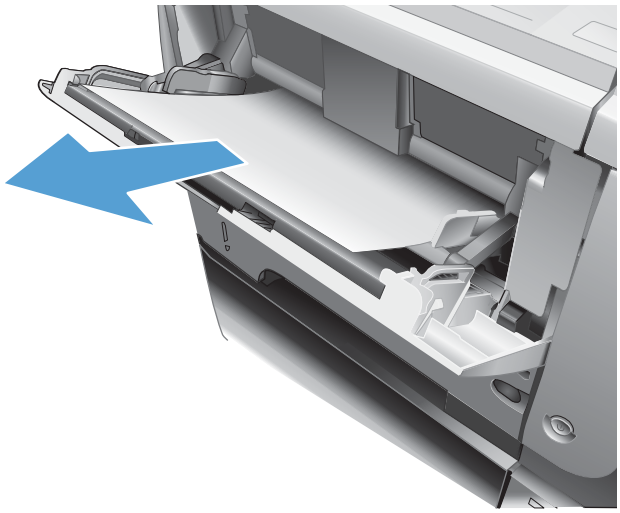
Clear jams in the output-bin area

1. If paper is visible from the output bin, grasp the leading edge and remove it.

Clear jams in Tray 1

1. If most of the sheet of paper is visible in the tray, slowly pull the jammed paper out of the product.

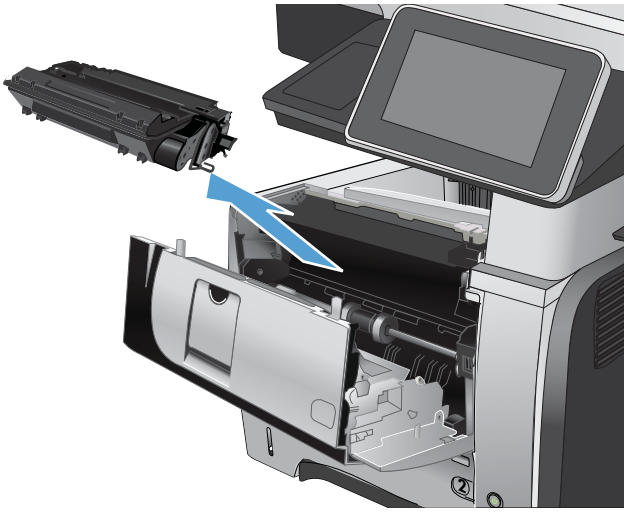
   If most of the sheet of paper has been pulled inside the product, continue with the following steps.



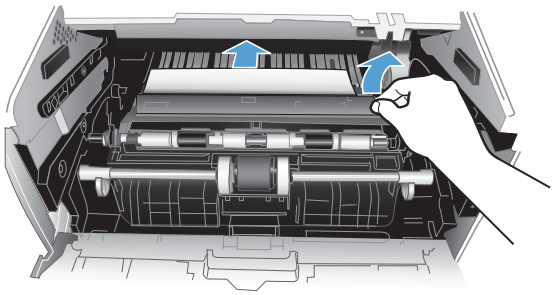
2. Press the front-door-release button.

3. Open the front door.

4. Remove the toner cartridge.



5. Lift the jam-access covers and remove any jammed paper.



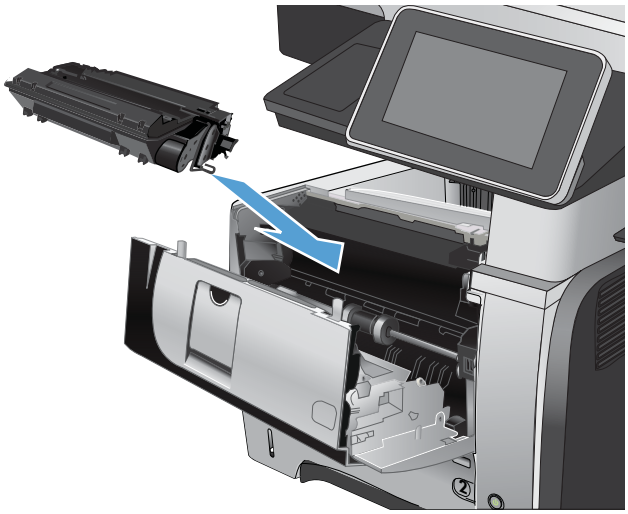
6. Open the rear door, and push down so it is fully opened to a 90° angle.

   CAUTION: The fuser can be hot while the product is in use. Wait for the fuser to cool before clearing jams.

   NOTE: The rear door has two positions. It opens to a 45° angle for the rear output bin and to a 90° angle for clearing jams.

7. Remove any jammed paper.

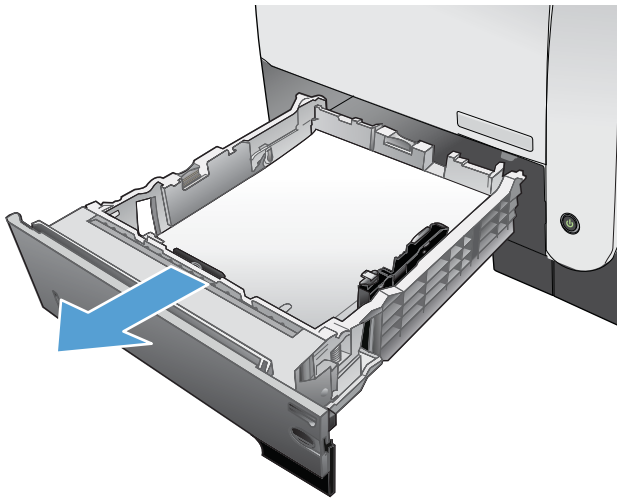
8. Reinsert the toner cartridge.



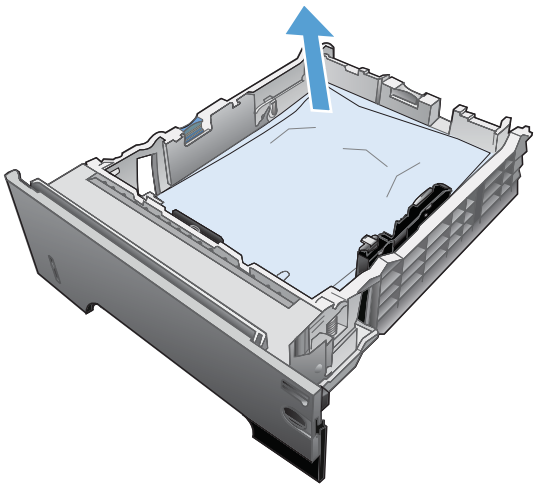
9. Close the front door.

Clear jams in Tray 2 or an optional 500-sheet tray

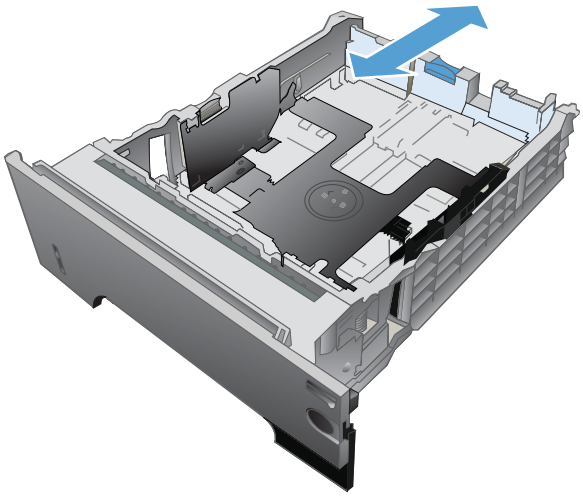
1. Remove the tray from the product.



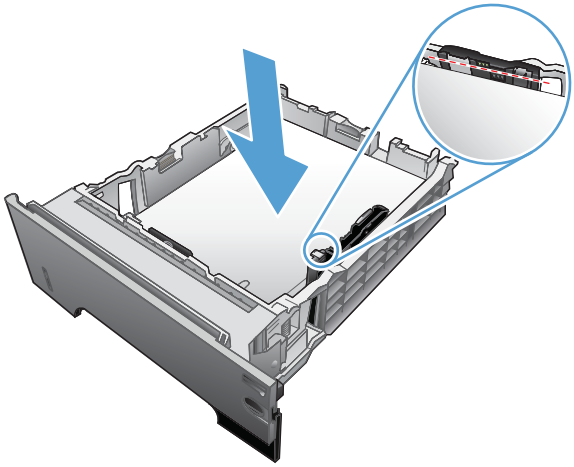
2. Remove the paper from the tray, and discard any damaged paper.



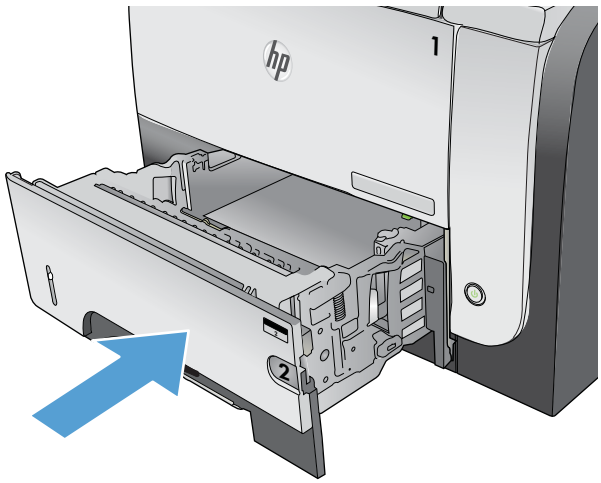
3. Verify that the rear paper guide is adjusted to the indentation for the correct paper size. If necessary, pinch the release and move the rear paper guide to the correct position. It should click into place.



4. Load the paper into the tray. Make sure that the stack is flat at all four corners and that the top of the stack is below the maximum-height indicators.



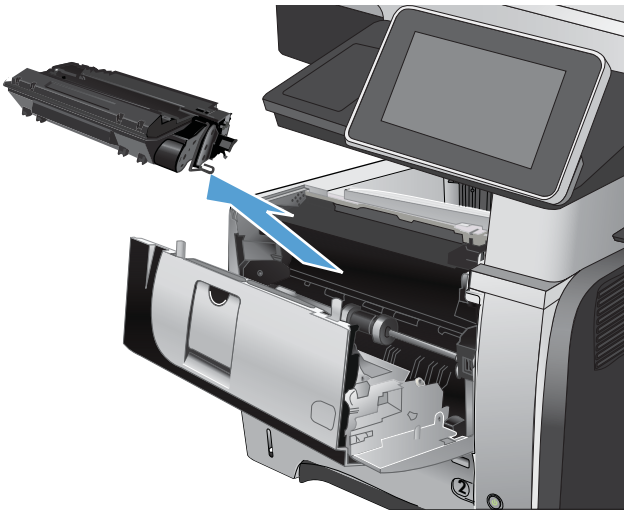
5. Reinsert and close Tray 2.



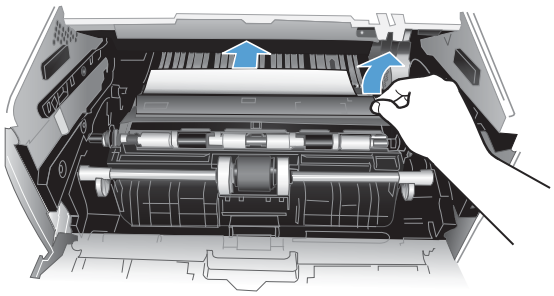
6. Press the front-door-release button.

7. Open the front door.

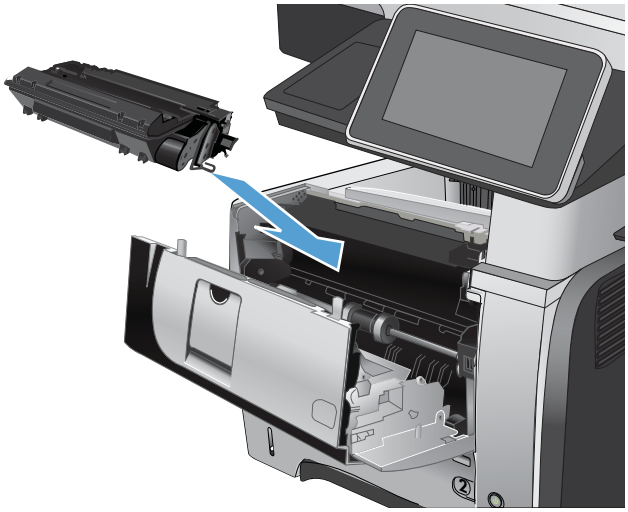
8. Remove the toner cartridge.



9. Lift the jam-access covers and remove any jammed paper.



10. Reinsert the toner cartridge.



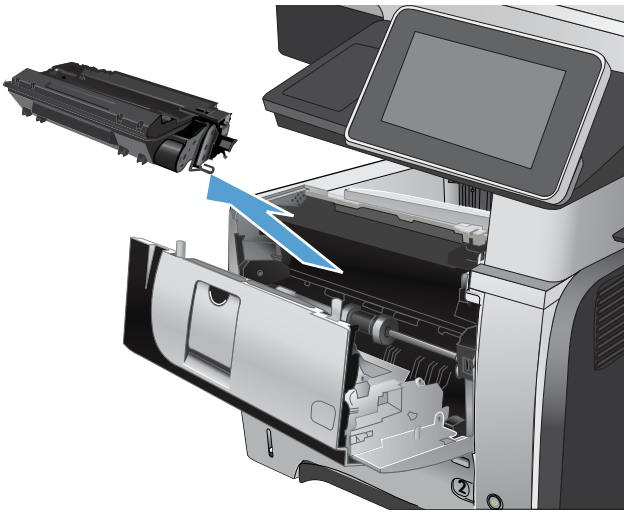
11. Close the front door.

Clear jams in the toner-cartridge area

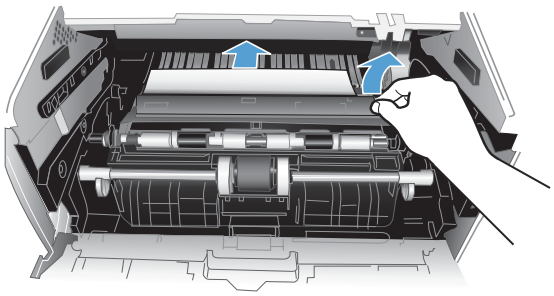
1. Press the front-door-release button.

2. Open the front door.

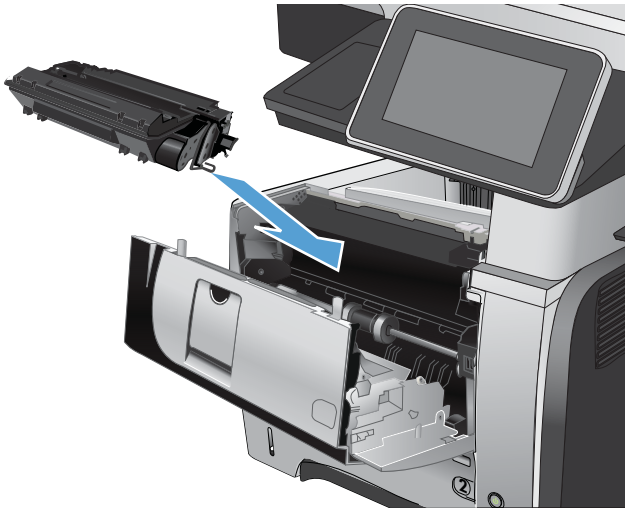
3. Remove the toner cartridge.



4. Lift the jam-access covers and remove any jammed paper.



5. Reinsert the toner cartridge.



6. Close the front door.

Clear jams in the rear-door and the fuser area

1. Open the rear door, and push down so it is fully opened to a 90° angle.

   CAUTION: The fuser can be hot while the product is in use. Wait for the fuser to cool before clearing jams.

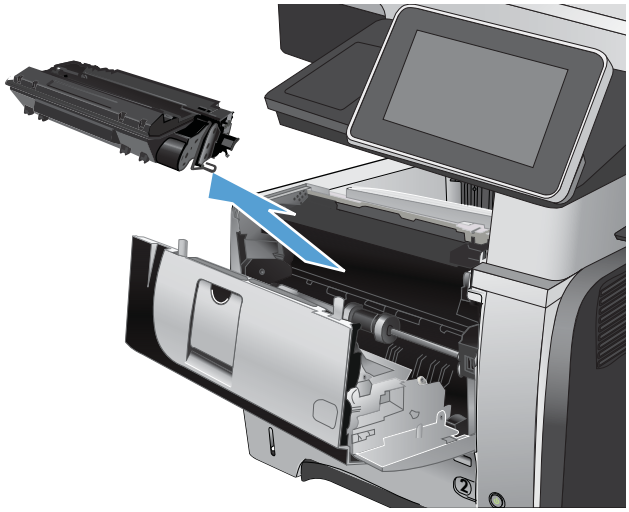
   NOTE: The rear door has two positions. It opens to a 45° angle for the rear output bin and to a 90° angle for clearing jams.

2. Remove any jammed paper.

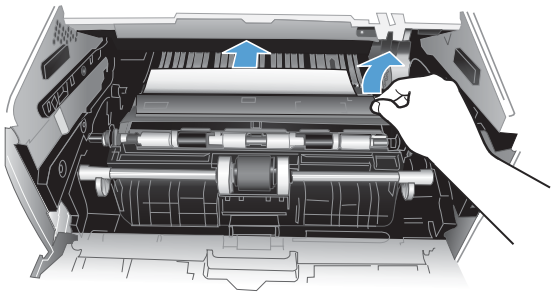
3. Press the front-door-release button.

4. Open the front door.

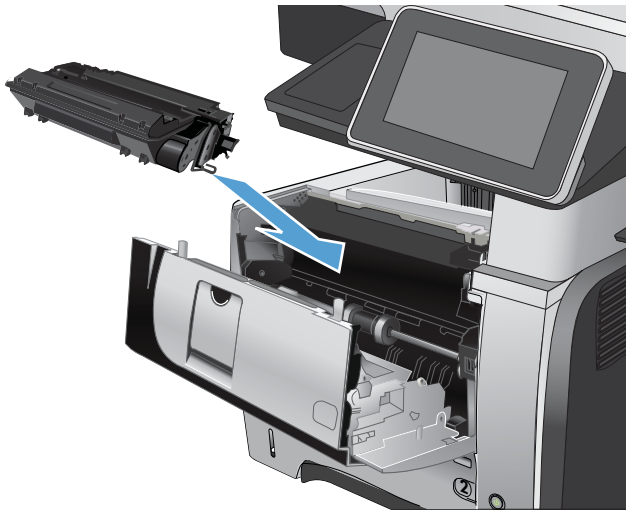
5. Remove the toner cartridge.



6. Lift the jam-access covers and remove any jammed paper.



7. Reinsert the toner cartridge.

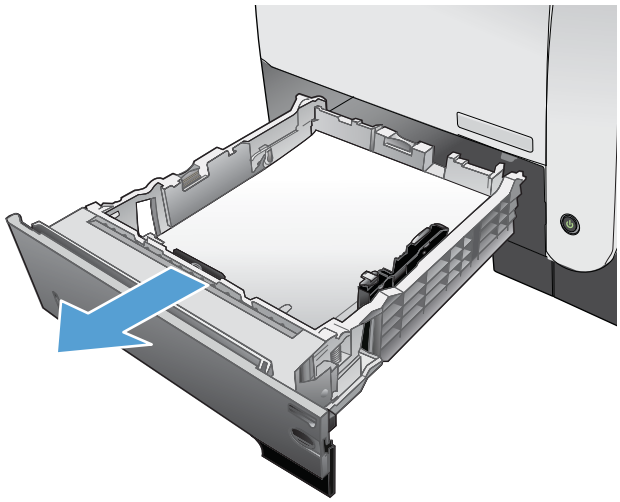


8. Close the front door.

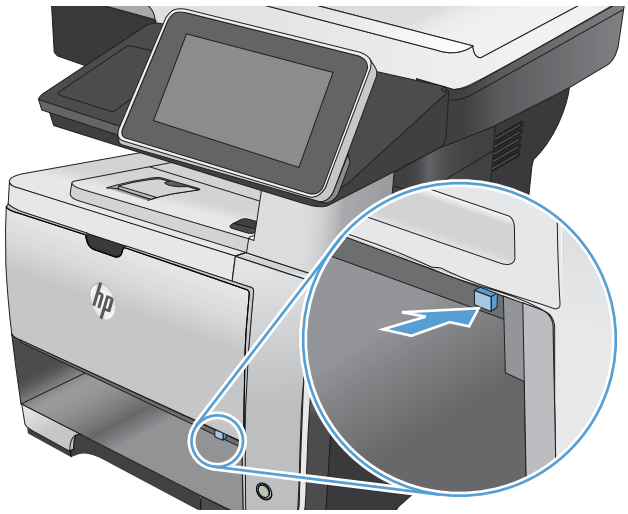
9. Close the rear door.

Clear jams in the duplexer

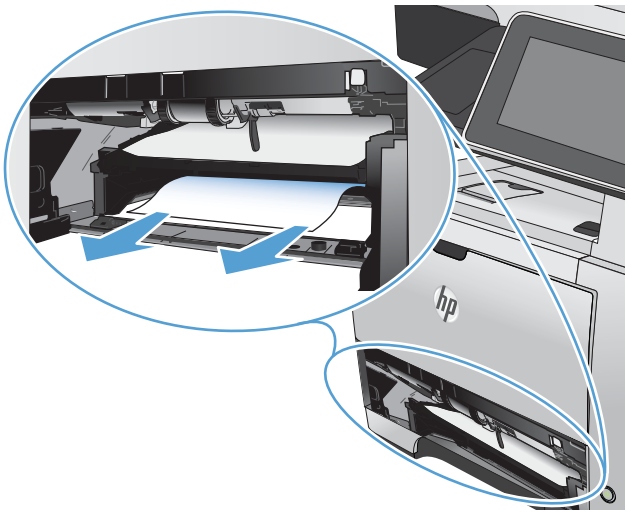
1. Completely remove Tray 2 from the product.



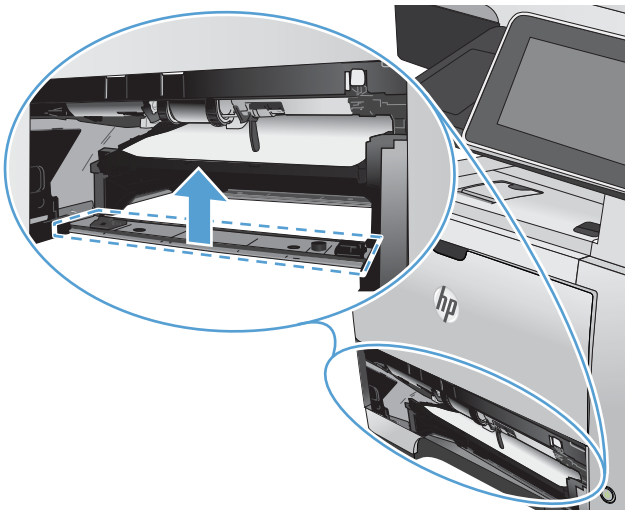
2. Push the green button to release the duplex pan.



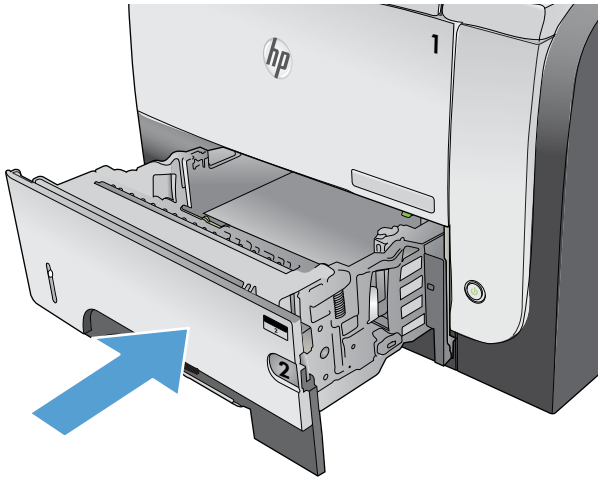
3. Remove any jammed paper.



4. Close the duplex pan.



5. Reinsert Tray 2.



6. Open the rear door, and push down so it is fully opened to a 90° angle.

   NOTE: The rear door has two positions. It opens to a 45° angle for the rear output bin and to a 90° angle for clearing jams.

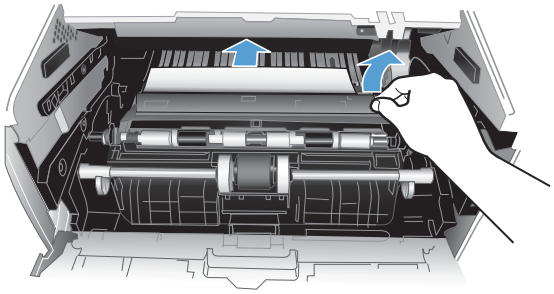
7. Remove any jammed paper.

8. Press the front-door-release button.

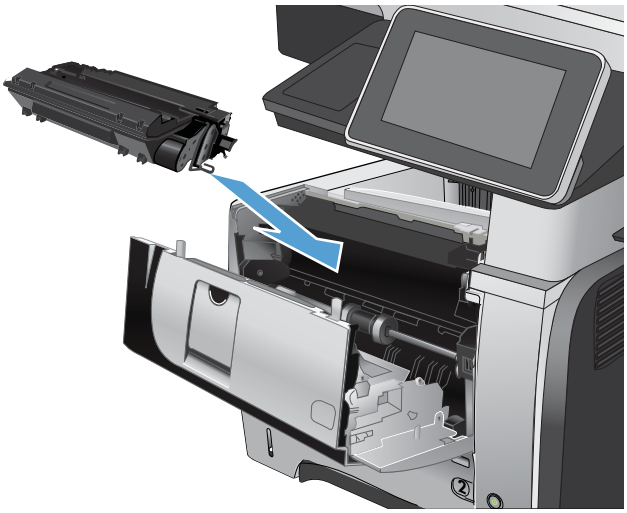
9. Open the front door.

10. Remove the toner cartridge.

11. Lift the jam-access covers and remove any jammed paper.



12. Reinsert the toner cartridge.



13. Close the front door.

14. Close the rear door.

Jam causes and solutions

Jams in the top cover and product cassette

Cause	Solution
The cassette separation pad is worn or deformed.	Replace the cassette separation pad.
The cassette pickup roller is worn or deformed.	Replace the cassette pickup roller.
Poor contact of the cassette pickup solenoid drive connector.	Reconnect the connector (J1601).
The cassette pickup solenoid is defective.	Replace the cassette pickup solenoid.
The registration roller is dirty, worn or deformed.	Clean the registration roller if it is dirty.
The registration assembly is defective.	• Check the spring of the registration shutter and place it in correct position. • Replace the registration assembly if the registration shutter is damaged or worn.

Jams in the top cover and product cassette

Cause	Solution
The TOP sensor (PS215) lever is defective.	• Check the sensor lever and place it in correct position to move smoothly and freely. • Replace the sensor if the sensor lever is damaged.
Poor contact of the TOP sensor (PS215) connector.	Reconnect the connector (J507) on the high-voltage power supply.
The TOP sensor (PS215) is defective.	Replace the sensor.

Jams in the input tray area (optional 500-sheet input tray)

Cause	Solution
The 500-sheet tray separation pad is worn or deformed.	Replace the 500-sheet tray separation pad.
The 500-sheet tray pickup roller is worn or deformed.	Replace the 500-sheet tray pickup roller.
Poor contact of the 500-sheet tray pickup solenoid drive connector.	Reconnect the connector (J407) on the 500-sheet tray connector PCA.
The 500-sheet tray pickup solenoid is defective.	Replace the 500-sheet tray pickup solenoid.

Jams in input tray area (Tray 1; multipurpose tray)

Cause	Solution
The Tray 1 separation pad is worn or deformed.	Replace Tray 1.
The Tray 1 pickup roller is worn or deformed.	Replace the Tray 1 pickup roller.
Poor contact of the Tray 1 pickup solenoid drive connector.	Reconnect the connector (J1602).
The Tray 1 pickup solenoid is defective.	Replace the Tray 1 pickup solenoid.

Jams in the input tray areas

Cause	Solution
Multiple-feed of media.	Replace the pickup roller or separation pad if worn or deformed.
The registration roller is worn or deformed.	Replace the registration assembly if the registration roller is damaged or worn.
The transfer roller is not installed correctly.	Reinstall the transfer roller.
The transfer roller is worn or deformed.	Replace the transfer roller.
Poor contact of the main motor connector.	Reconnect the connector (J1503).
The main motor is defective.	Replace the main motor.

Jam in the rear door and fuser area (delivery-delay jam)

Cause	Solution
Dirt or scratches on the fuser-inlet guide.	• Clean the fuser-inlet guide if dirty or if there is a toner build up on it. • Replace the fuser if it is scratched.
The fuser delivery sensor (PS2) lever is defective.	• Check the sensor lever and place it in correct position to move smoothly and freely. • Replace the fuser if the sensor lever is damaged.
Poor contact of the fuser delivery sensor connector.	• Reconnect the connectors (J22 and J24) on the transit (inline) connector. • Reconnect the connector (J1608).
The fuser delivery sensor (PS2) is defective.	Replace the fuser.

Jam in the rear door and fuser area (delivery-stationary jam)

Cause	Solution
Multiple-feed of media.	Replace the pickup roller or separation pad if worn or deformed.
Dirt or scratches on the fuser delivery upper guide or the fuser-delivery lower guide.	• Clean the fuser-delivery upper guide or fuser-delivery lower guide if dirt or if there is a toner build up on it. • Replace the fuser if the guides are deformed or scratched.
The fuser delivery roller is dirty, worn or deformed.	• Clean the fuser delivery roller if it is dirty. • Replace the fuser if the fuser delivery roller is worn or deformed.
Fuser delivery sensor (PS2) lever is defective.	Replace the fuser.
The face-down tray media-full sensor lever is defective.	• Check the sensor lever and place it in correct position to move smoothly and freely. • Replace the top cover if the sensor lever is damaged.
The face-down delivery roller is worn or deformed.	Replace the face-down delivery roller.
The fuser film or the fuser roller is defective.	Replace the fuser.

Jams in the top cover, rear door, fuser, and duplex area (residual media jam)

Cause	Solution
Residual media in the product.	Check the media path and remove any residual media.

Jams in the top cover, rear door, fuser, and duplex area (residual media jam)

Cause	Solution
The TOP sensor (P215) lever is defective.	• Check the sensor lever and place it in correct position to move smoothly and freely. • Replace the product if the sensor lever is damaged.
Poor contact of the TOP sensor (PS215) connector.	Reconnect the connector (J507) on the high-voltage power supply.
The TOP sensor (PS215) is defective.	Replace the sensor.
The media width sensor (PS225) lever is defective.	• Check the sensor lever and place it in correct position to move smoothly and freely. • Replace the product if the sensor lever is damaged.
Poor contact of the media width sensor (PS225) connector.	Reconnect the connector (J513) on the high-voltage power supply.
The media width sensor (PS225) is defective.	Replace the sensor.
The fuser delivery sensor (PS2) lever is defective.	• Check the sensor lever and place it in correct position to move smoothly and freely. • Replace the fuser if the sensor lever is damaged.
Poor contact of the fuser delivery sensor connector.	• Reconnect the connectors (J22 and J24) on the transit (inline) connector. • Reconnect the connector (J1608).
The fuser delivery sensor (PS2) is defective.	Replace the fuser.
The duplex media-feed sensor (PS502) lever is defective (duplex models).	• Check the sensor lever and place it in correct position to move smoothly and freely. • Replace the high-voltage power supply if the sensor lever is damaged.
Poor contact of the duplex media-feed sensor (PS502) connector (duplex models).	Reconnect the connector (J501) on the high-voltage power supply.
The duplex media-feed sensor is defective (duplex models).	Replace the high-voltage power supply.

Jams in the rear door and fuser area (fuser wrapping jam)

Cause	Solution
The fuser film or the pressure roller is defective.	Replace the fuser.

Jams in the rear door, fuser, and duplex areas (duplex models; duplex re-pickup jam)

Cause	Solution
The face-down delivery roller is worn or deformed.	Replace the delivery assembly.

Jams in the rear door, fuser, and duplex areas (duplex models; duplex re-pickup jam)

Cause	Solution
The duplex media-feed sensor (PS502) lever is defective.	• Check the sensor lever and place it in the correct position to move smoothly and freely. • Replace the high-voltage power supply if the sensor lever is damaged.
Poor contact of the duplex media-feed sensor (PS502) connector.	Reconnect the connector (J501) on the high-voltage power supply.
The duplex media-feed sensor is defective.	Replace the high-voltage power supply.

Solve paper-handling problems

- The product picks up multiple sheets of paper
- The product does not pick up paper
- The document feeder jams, skews, or picks up multiple sheets of paper

The product picks up multiple sheets of paper

If the product picks up multiple sheets of paper from the tray, try these solutions.

1. Remove the stack of paper from the tray and flex it, rotate it 180 degrees, and flip it over. *Do not fan the paper.* Return the stack of paper to the tray.
2. Use only paper that meets HP specifications for this product.
3. Use paper that is not wrinkled, folded, or damaged. If necessary, use paper from a different package.
4. Make sure the tray is not overfilled. If it is, remove the entire stack of paper from the tray, straighten the stack, and then return some of the paper to the tray.
5. Make sure the paper guides in the tray are adjusted correctly for the size of paper. Adjust the guides to the appropriate indentation in the tray.
6. Make sure the printing environment is within recommended specifications.

The product does not pick up paper

If the product does not pick up paper from the tray, try these solutions.

1. Open the product and remove any jammed sheets of paper.
2. Load the tray with the correct size of paper for your job.
3. Make sure the paper size and type are set correctly on the product control panel.
4. Make sure the paper guides in the tray are adjusted correctly for the size of paper. Adjust the guides to the appropriate indentation in the tray.
5. Check the product control panel to see if the product is waiting for you to acknowledge a prompt to feed the paper manually. Load paper, and continue.
6. The rollers above the tray might be contaminated. Clean the rollers with a lint-free cloth dampened with warm water.

The document feeder jams, skews, or picks up multiple sheets of paper

- The original might have something on it, such as staples or self-adhesive notes, that must be removed.
- Check that all rollers are in place and that the roller-access cover inside the document feeder is closed.
- Make sure that the top document-feeder cover is closed.
- The pages might not be placed correctly. Straighten the pages and adjust the paper guides to center the stack.
- The paper guides must be touching the sides of the paper stack to work correctly. Make sure that the paper stack is straight and the guides are against the paper stack.
- The document feeder input tray or output bin might contain more than the maximum number of pages. Make sure the paper stack fits below the guides in the input tray, and remove pages from the output bin.
- Verify that there are no pieces of paper, staples, paper clips, or other debris in the paper path.
- Clean the document-feeder rollers and the separation pad. Use compressed air or a clean, lint-free cloth moistened with warm water. If misfeeds still occur, replace the rollers.
- From the Home screen on the product control panel, scroll to and touch the Supplies button. Check the status of the document-feeder kit, and replace it if necessary.

Use manual print modes

Try the following manual print modes to see if they solve the image-quality problems.

Select a manual print mode

1. From the Home screen on the product control panel, scroll to and touch the Administration button.
2. Open the following menus:
   - General Settings
   - Print Quality
   - Adjust Paper Types
3. Select a paper type, and then select the mode to adjust.
4. Select a value for the mode, and then touch the Save button.

Table 2-30 Print modes under the Adjust Paper Types sub menu

Print Mode	• Normal mode • Heavy Mode • Card Stock Mode • Transparency Mode • Envelope Control • Label Mode • Extra Heavy Mode • Light Mode • Extra Light Mode • Rough Mode • Bond mode • Mid-weight mode **NOTE:** Not all print modes are available for all paper types.

Table 2-30 Print modes under the Adjust Paper Types sub menu (continued)

Resistance Mode	Set to Up to resolve print-quality issues caused by poor secondary transfer in low-humidity environments with resistive or rough surface paper.
Humidity Mode	With glossy film, set to High when the product is in a high-humidity environment and print-quality defects occur on HP Tough Paper or Opaque film. With transparencies, set to High when the product is in a high-humidity environment and print-quality defects occur on color transparencies on the first page of a print job. With all other paper types, set to High when the product is in a high-humidity environment and light density occurs on the first page of a print job.

Table 2-31 MP modes under the Optimize submenu

Line Detail	Normal Up Off
Environment	Set to Low Temp if the product is operating in a low-temperature environment and you are having problems with print quality such as blisters in the printed image.
Restore Optimize	Use this item to reset the menu defaults.

Solve image-quality problems

Image defect examples

These examples identify the most common print-quality problems.

Table 2-32 Image defect examples

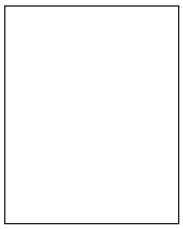
Problem	Image example	Solution
Blank page		1. The laser/scanner shutter on the toner cartridge might be damaged. Replace the toner cartridge. 2. The laser/scanner shutter on the laser/scanner might be damaged. Replace the laser/scanner. 3. The laser/scanner might be damaged. Replace the laser/scanner. 4. Poor developing bias with the cartridge contacts. Clean the contact on the toner cartridge. 5. The high-voltage power supply might be damaged. Replace the high-voltage power supply.
Light print (partial page)		1. Make sure that the toner cartridge is fully installed. 2. The toner cartridge might be almost empty. Check the supplies status, and replace the toner cartridge if necessary. 3. The paper might not meet HP specifications (for example, the paper is too moist or too rough).
Light print (entire page)		1. Make sure that the toner cartridge is fully installed. 2. Make sure that the Economode setting is turned off at the control panel and in the print driver. For more information, see the product user guide. 3. Open the Administration menu at the product control panel. Open the General Settings menu and then open the Print Quality menu. Increase the Toner density setting. 4. Try using a different type of paper. 5. The toner cartridge might be reaching its estimated end of life. Check the supplies status, and replace the toner cartridge if necessary.

Table 2-32 Image defect examples (continued)

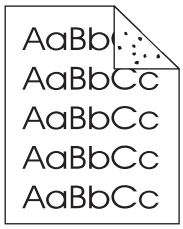
Problem	Image example	Solution
		Perform the following test Stop a print job during the print operation before it is complete, then remove the toner cartridge. Open the photosensitive drum shield, and look at the toner image on the drum. ◦ If the image is not fully transferring to the page, replace the transfer roller. ◦ If the toner on the drum is faint, replace the laser/scanner. 6. The transfer roller shaft might be dirty. Remove the transfer roller and clean the shaft to ensure good contact. 7. If the transfer roller is deformed or damaged, replace the roller. 8. The high-voltage power supply might be damaged. Replace the high-voltage power supply. 9. The laser/scanner might be damaged. Replace the laser/scanner. If replacing the laser/scanner does not resolve the problem and the high-voltage power supply was not replaced (step 8), replace the high-voltage power supply.
Specks (front or back of the page is dirty)		Specks might appear on a page after a jam has been cleared. 1. The paper might be dirty. Use a new package of paper. make sure that the paper is stored correctly. See your product user guide. 2. Print a few more pages to see if the problem corrects itself. 3. Clean the inside of the product and run a cleaning page to clean the fuser. 4. Try using a different type of paper. 5. Check the toner cartridge for leaks. If the toner cartridge is leaking, replace it. 6. The cassette pickup roller might be dirty. Clean the roller. If it cannot be cleaned, replace the roller. 7. Repetitive dirt marks can be caused by the registration roller, transfer roller or pressure roller. Use the repetitive defects ruler to identify the problem, and then replace the appropriate assembly. 8. The media-feed guide, or the fuser-inlet guide might be dirty. Clean the guide. 9. The delivery rollers might be dirty. Clean the rollers.

Table 2-32 Image defect examples (continued)

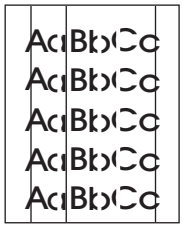
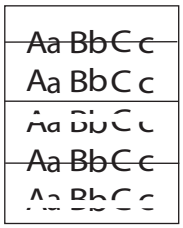
Problem	Image example	Solution
Dropouts		1. Make sure that the environmental specifications for the product are being met. 2. Try using a smoother paper. 3. If the transfer roller is deformed or damaged, replace the roller. 4. The high-voltage contact of the static eliminator with the toner cartridge might be dirty. Clean the contact. 5. The photosensitive drum, primary charging roller, or developing roller might be damaged. Replace the toner cartridge. 6. The fuser film might be scratched or dirty. Replace the fuser. 7. The high-voltage power supply might be damaged. Replace the high-voltage power supply.
Lines		1. Print a few more pages to see if the problem corrects itself. 2. Clean the inside of the product and run a cleaning page to clean the fuser. 3. The photosensitive drum might be scratched. Replace the toner cartridge. 4. The fuser-inlet guide might be dirty. Clean the guide. 5. The fuser film might be scratched. Replace the fuser.
Horizontal lines		1. The photosensitive drum might be scratched. Replace the toner cartridge. 2. The fuser film might be dirty or damaged. Replace the fuser.

Table 2-32 Image defect examples (continued)

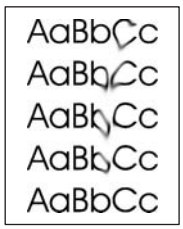
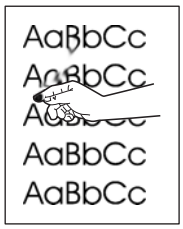
Problem	Image example	Solution
Gray background (image is obviously dark)		1. Do not use paper that has already been run through the product. 2. Try using a different type of paper. 3. Print a few more pages to see if the problem corrects itself. 4. Turn over the paper in the tray. Also, try rotating the paper 180°. 5. Open the Administration menu at the product control panel. Open the General Settings menu and then open the Print Quality menu. Increase the Toner density setting. 6. Make sure that the environmental specifications for the product are being met. 7. The toner cartridge might need to be replaced. 8. The print-cartridge ground or bias contacts might be dirty. Clean the contacts. 9. Stop a print job before it is complete, and then remove the toner cartridge. Open the photosensitive drum shield, and look at the toner image on the drum. ◦ If the image is not fully transferring to the page, replace the transfer roller. ◦ If the toner on the drum is faint, replace the laser/scanner. 10. The high-voltage power supply might be damaged. Replace the high-voltage power supply.
Toner smear		1. Print a few more pages to see if the problem corrects itself. 2. Try using a different type of paper. 3. Make sure that the environmental specifications for the product are being met. 4. Clean the inside of the product and run a cleaning page to clean the fuser. 5. The toner cartridge might need to be replaced.
Loose toner		Loose toner, in this context, is defined as toner that can be rubbed off the page. 1. If you have observed a rougher texture on one side of your paper, try printing on the smoother side. 2. Make sure that the environmental specifications for the product are being met. 3. Make sure that the type and quality of the paper you are using meet HP specifications. For more information, see the product user guide. 4. The pressure roller is dirty, the fuser film is scratched, or a foreign substance is on the fuser film. Use the Fuser Test Page option in the Troubleshooting menu to test the fuser. If the error persists, replace the fuser.

Table 2-32 Image defect examples (continued)

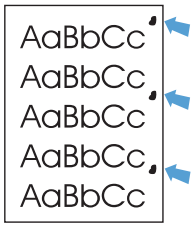
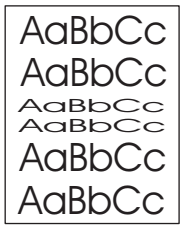
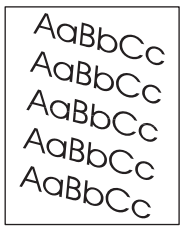
Problem	Image example	Solution
Repeat defects		1. Print a few more pages to see if the problem corrects itself. 2. Clean the inside of the product and run a cleaning page to clean the fuser. 3. Use the repetitive defect ruler to determine if the defect is caused by the fuser or the toner cartridge. ◦ If the toner cartridge is causing the defect, run the print/stop test at the 500 msec setting. If the test shows a defect, replace the toner cartridge. ◦ Use the Fuser Test Page option in the Troubleshooting menu to test the fuser. If the error persists, replace the fuser.
Repeat image		This type of defect might occur when using preprinted forms or a large quantity of narrow paper. Verify that the preprinted ink used on forms meet HP specifications for use in laser printers. 1. Print a few more pages to see if the problem corrects itself. 2. Make sure that the type and quality of the paper you are using meet HP specifications. For more information, see the product user guide. 3. Verify that the product is configured for the correct paper type. 4. Use the Fuser Test Page option in the Troubleshooting menu to test the fuser. If the error persists, replace the fuser.
Misformed characters		1. Print a few more pages to see if the problem corrects itself. 2. Make sure that the environmental specifications for the product are being met. 3. Make sure that the type and quality of the paper you are using meet HP specifications. For more information, see the product user guide. 4. The laser/scanner wire connectors might have poor contact. Reconnect the connectors (J12 and J3100). 5. The laser/scanner might be damaged. Replace the laser/scanner.
Page skew		1. Print a few more pages to see if the problem corrects itself. 2. Verify that no torn pieces of paper are inside the product. 3. Make sure that paper is loaded correctly and that all adjustments have been made. Make sure that the guides in the tray are not too tight or too loose against the paper. 4. Turn over the paper in the tray. Also, try rotating the paper 180°. 5. Make sure that the type and quality of the paper you are using meet HP specifications. For more information, see the product user guide. 6. Make sure that the environmental specifications for the product are being met.

Table 2-32 Image defect examples (continued)

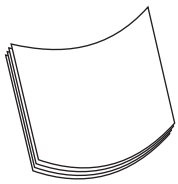
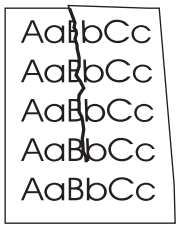
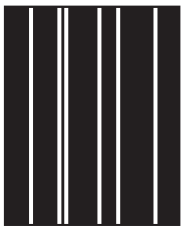
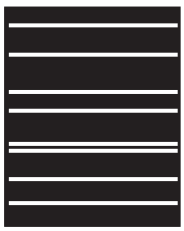
Problem	Image example	Solution
Curl or wave		1. Turn over the paper in the tray. Also, try rotating the paper 180°. 2. Make sure that the type and quality of the paper you are using meet HP specifications. For more information, see the product user guide. 3. Make sure that the environmental specifications for the product are being met. 4. Try printing to a different output bin.
Wrinkles or creases		1. Print a few more pages to see if the problem corrects itself. 2. Make sure that the environmental specifications for the product are being met. 3. Turn over the paper in the tray. Also, try rotating the paper 180°. 4. Make sure that paper is loaded correctly and all adjustments have been made. For more information, see the product user guide. 5. Make sure that the type and quality of the paper you are using meet HP specifications. See the product user guide. 6. If envelopes are creasing, try storing envelopes so that they lie flat.
Vertical white lines		1. Print a few more pages to see if the problem corrects itself. 2. Make sure that the type and quality of the paper you are using meet HP specifications. For more information, see the product user guide. 3. The photosensitive drum might be scratched, or the developing roller might be damaged. Replace the toner cartridge. 4. The laser beam window might be dirty. Clean the laser beam window on the laser/scanner. 5. The fuser inlet guide might be dirty. Clean the guide. 6. The fuser film might be scratched or dirty. Replace the fuser. 7. The laser/scanner might be damaged. Replace the laser/scanner.
Horizontal white lines		1. The photosensitive drum might be scratched, or the developing roller might be damaged. Replace the toner cartridge. 2. The fuser film might be damaged. Replace the fuser.
Black page		1. The toner-cartridge ground or bias contacts might be dirty. Clean the contacts. 2. The primary charging roller might be defective. Replace the toner cartridge. 3. The high-voltage power supply might be damaged. Replace the high-voltage power supply.

Table 2-32 Image defect examples (continued)

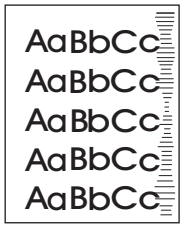
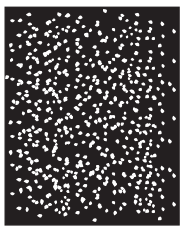
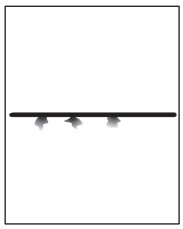
Problem	Image example	Solution
Tire tracks		This defect typically occurs when the toner cartridge has far exceeded its estimated life. For example, if you are printing a very large quantity of pages with very little toner coverage. 1. The toner cartridge might need to be replaced. 2. Reduce the number of pages that you print with very low toner coverage.
White spots on black or in the image		1. Print a few more pages to see if the problem corrects itself. 2. Make sure that the type and quality of the paper you are using meet HP specifications. For more information, see the product user guide. 3. Make sure that the environmental specifications for the product are being met. 4. The toner cartridge might need to be replaced. 5. If the transfer roller is deformed or damaged, replace the roller. 6. The transfer roller shaft might be dirty (poor contact). Remove the transfer roller and clean the shaft. 7. The high-voltage power supply might be damaged. Replace the high-voltage power supply.
Scattered lines		1. Make sure that the type and quality of the paper you are using meet HP specifications. For more information, see the product user guide. 2. Make sure that the environmental specifications for the product are being met. 3. Turn over the paper in the tray. Also, try rotating the paper 180°. 4. Change the toner density. Open the Administration menu at the product control panel. Open the General Settings menu and then open the Print Quality menu. Change the Toner density setting. 5. Open the Administration menu at the product control panel. Open the General Settings menu and then open the Print Quality menu. Open the Optimize menu and set the Line Detail setting to Up.

Table 2-32 Image defect examples (continued)

Problem	Image example	Solution
Blurred print		1. Make sure that the type and quality of the paper you are using meet HP specifications. For more information, see the product user guide. 2. Make sure that the environmental specifications for the product are being met. 3. Turn over the paper in the tray. Also, try rotating the paper 180°. 4. Do not use paper that already has been run through the product. 5. Decrease the toner density. Open the Administration menu at the product control panel. Open the General Settings menu and then open the Print Quality menu. Decrease the Toner density setting.
Random image repetition	 	If an image that appears at the top of the page (in solid black) repeats further down the page (in a gray field), the toner might not have been completely erased from the last job. (The repeated image might be lighter or darker than the field it appears in.) • Change the tone (darkness) of the field that the repeated image appears in. • Change the order in which the images are printed. For example, have the lighter image at the top of the page, and the darker image farther down the page. • From your software program, rotate the whole page 180° to print the lighter image first. • If the defect occurs later in a print job, turn the product off for 10 minutes, and then turn it on to restart the print job.

Clean the product

Over time, particles of toner and paper accumulate inside the product. This can cause print-quality problems during printing. Cleaning the product eliminates or reduces these problems.

Clean the paper path and print-cartridge areas every time that you change the toner cartridge or whenever print-quality problems occur. As much as possible, keep the product free from dust and debris.

To clean the product exterior, use a soft, water-moistened cloth.

Print a cleaning page

Print a cleaning page to remove dust and excess toner from the fuser if you are having any of the following problems:

- Specks of toner are on the printed pages.
- Toner is smearing on the printed pages.
- Repeated marks occur on the printed pages.

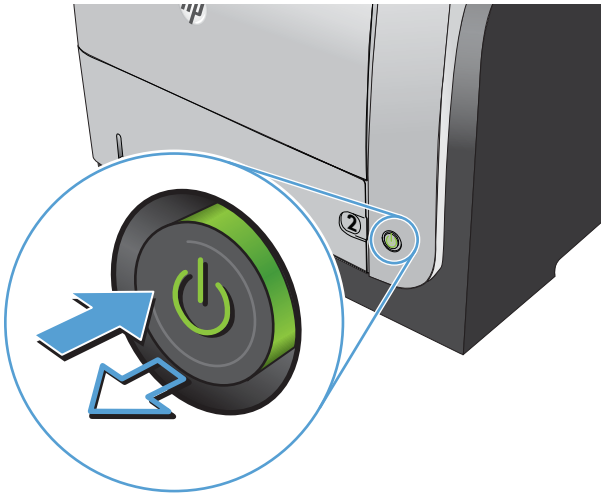
Use the following procedure to print a cleaning page.

1. From the Home screen on the product control panel, scroll to and touch the Device Maintenance button.
2. Open the following menus:
    - Calibration/Cleaning
    - Cleaning Page
3. Touch the Print button to print the page.
4. The cleaning process can take several minutes. When it is finished, discard the printed page.

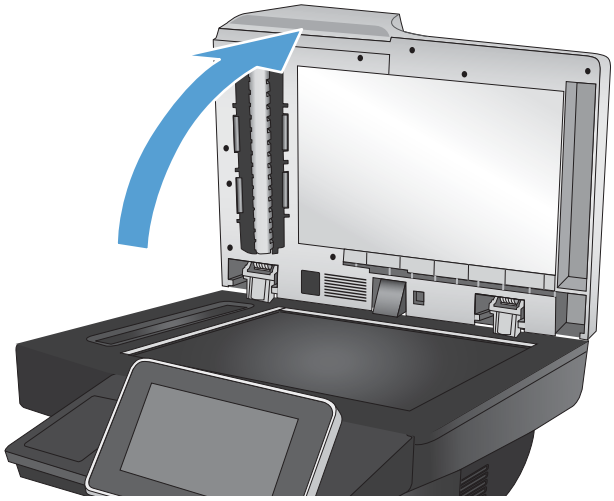
Check the scanner glass for dirt or smudges

Over time, specks of debris might collect on the scanner glass and white plastic backing which can affect performance. Use the following procedure to clean the scanner glass and white plastic backing.

1. Press the power button to turn off the product, and then disconnect the power cable from the electrical outlet.

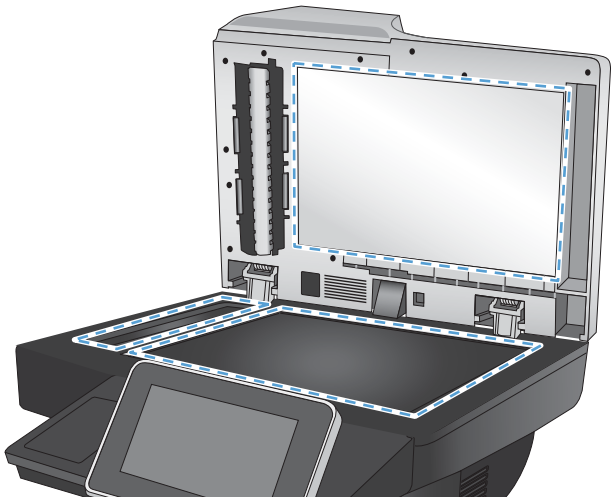


2. Open the scanner lid.

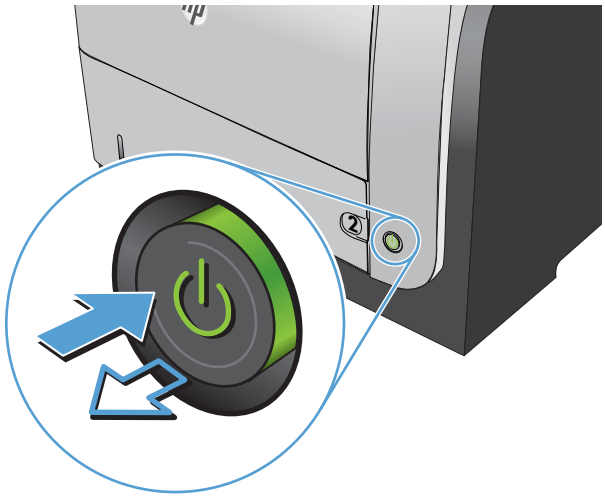


3. Clean the scanner glass and the white plastic backing by using a soft cloth or sponge that has been moistened with nonabrasive glass cleaner. Dry the glass and white plastic backing by using a chamois or a cellulose sponge to prevent spotting.

   CAUTION: Do not use abrasives, acetone, benzene, ammonia, ethyl alcohol, or carbon tetrachloride on any part of the product; these can damage the product. Do not place liquids directly on the glass or platen. They might seep and damage the product.

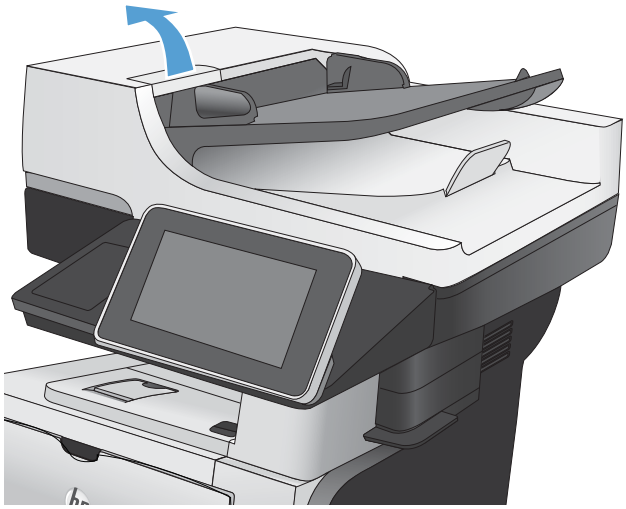


4. Connect the power cable to an outlet, and then press the power button to turn on the product.

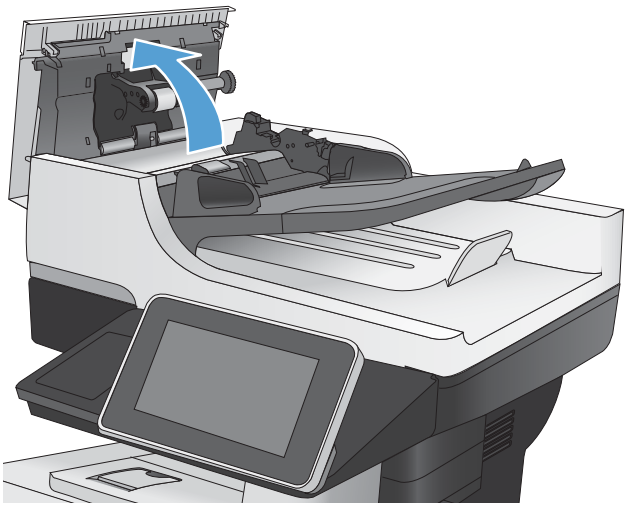


Clean the pickup rollers and separation pad in the document feeder

1. Lift the document-feeder latch.

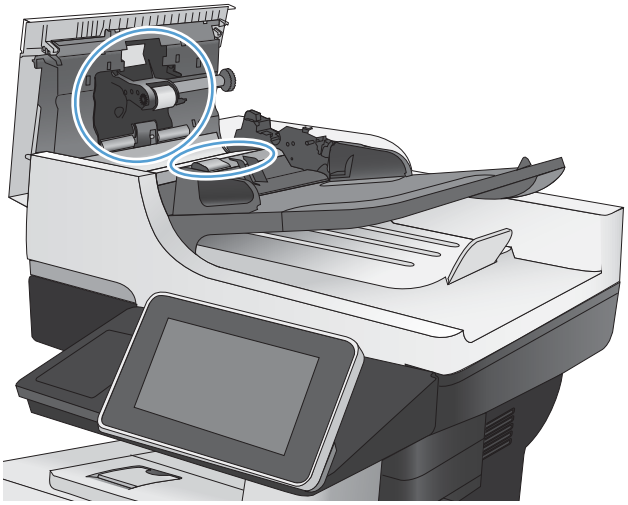


2. Open the document-feeder cover.

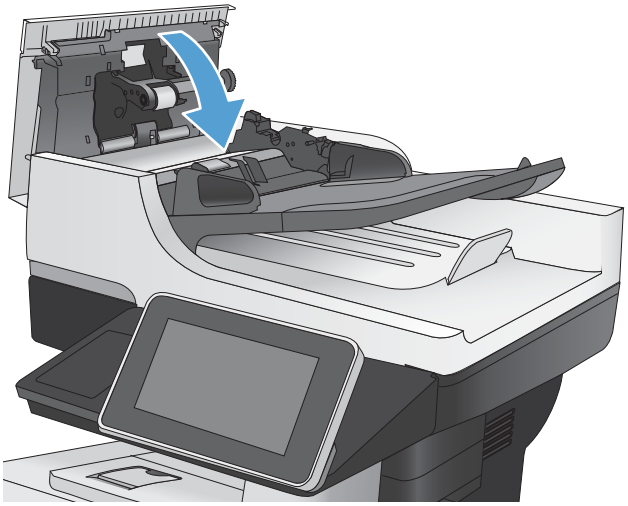


3. Remove any visible lint or dust from each of the feed rollers and the separation pad using compressed air or a clean lint-free cloth moistened with warm water.

   NOTE: Lift up the roller assembly so you can clean the second roller.



4. Close the document-feeder cover.



Solve performance problems

Table 2-33 Solve performance problems

Problem	Cause	Solution
Pages print but are totally blank.	The document might contain blank pages.	Check the document that you are printing to see if content displays on all of the pages.
	The product might be malfunctioning.	To check the product, print a Configuration page.
Pages print very slowly.	Heavier paper types can slow the print job.	Print on a different type of paper.
	Complex pages can print slowly.	Proper fusing might require a slower print speed to ensure the best print quality.
	Large batches, narrow paper, and special paper such as gloss, transparency, cardstock, and HP Tough Paper can slow the print job.	Print in smaller batches, on a different type of paper, or on a different size of paper.
Pages did not print.	The product might not be pulling paper correctly.	Make sure paper is loaded in the tray correctly.
	The paper is jamming in the product.	Clear the jam.
	The USB cable might be defective or incorrectly connected.	• Disconnect the USB cable at both ends and reconnect it. • Try printing a job that has printed in the past. • Try using a different USB cable.
	Other devices are running on your computer.	The product might not share a USB port. If you have an external hard drive or network switchbox that is connected to the same port as the product, the other device might be interfering. To connect and use the product, you must disconnect the other device or you must use two USB ports on the computer.

Solve connectivity problems

Solve USB connection problems

If you have connected the product directly to a computer, check the cable.

- Verify that the cable is connected to the computer and to the product.
- Verify that the cable is not longer than 2 m (6.65 ft). Try using a shorter cable.
- Verify that the cable is working correctly by connecting it to another product. Replace the cable if necessary.

Solve wired network problems

Check the following items to verify that the product is communicating with the network. Before beginning, print a configuration page from the product control panel and locate the product IP address that is listed on this page.

- The product has a poor physical connection.
- The computer is using the incorrect IP address for the product
- The computer is unable to communicate with the product
- The product is using incorrect link and duplex settings for the network
- New software programs might be causing compatibility problems
- The computer or workstation might be set up incorrectly
- The product is disabled, or other network settings are incorrect

The product has a poor physical connection.

1. Verify that the product is attached to the correct network port using a cable of the correct length.
2. Verify that cable connections are secure.
3. Look at the network port connection on the back of the product, and verify that the amber activity light and the green link-status light are lit.
4. If the problem continues, try a different cable or port on the hub.

The computer is using the incorrect IP address for the product

1. Open the printer properties and click the **Ports** tab. Verify that the current IP address for the product is selected. The product IP address is listed on the product configuration page.
2. If you installed the product using the HP standard TCP/IP port, select the box labeled **Always print to this printer, even if its IP address changes.**

3. If you installed the product using a Microsoft standard TCP/IP port, use the hostname instead of the IP address.
4. If the IP address is correct, delete the product and then add it again.

The computer is unable to communicate with the product

1. Test network communication by pinging the product.
   a. Open a command-line prompt on your computer. For Windows, click **Start**, click **Run**, and then type `cmd`.
   b. Type `ping` followed by the IP address for your product.
   c. If the window displays round-trip times, the network is working.
2. If the ping command failed, verify that the network hubs are on, and then verify that the network settings, the product, and the computer are all configured for the same network.

The product is using incorrect link and duplex settings for the network

Hewlett-Packard recommends leaving this setting in automatic mode (the default setting). If you change these settings, you must also change them for your network.

New software programs might be causing compatibility problems

Verify that any new software programs are correctly installed and that they use the correct print driver.

The computer or workstation might be set up incorrectly

1. Check the network drivers, print drivers, and the network redirection.
2. Verify that the operating system is configured correctly.

The product is disabled, or other network settings are incorrect

1. Review the configuration page to check the status of the network protocol. Enable it if necessary.
2. Reconfigure the network settings if necessary.

Service mode functions

Service menu

The Service menu is PIN-protected for added security. Only authorized service people have access to the Service menu. When you select Service from the list of menus, the product prompts you to type an eight-digit personal identification number (PIN).

NOTE: The product automatically exits the Service menu after about one minute if no items are selected or changed.

1. From the Home screen on the product control panel, scroll to and touch the Device Maintenance button.
2. Open the Service menu.
3. On the sign-in screen, select the Service Access Code option from the drop-down list.
4. Enter the following service access code for this product: 05052512.

The following menu items appear in the **Service** menu:

First level	Second level	Value	Description
Event Log			Allows you to print or view the product event log.
Clear Event Log			Use this item to clear the product event log.
Cycle Counts	Total Engine Cycles		
	Mono Cycle Count		The page count that is stored in NVRAM and printed on the configuration page represents the number of pages that the formatter has formatted (not including engine-test prints).
	Color Cycle Count		The page count that is stored in NVRAM and printed on the configuration page represents the number of pages that the formatter has formatted (not including engine-test prints).
	Refurbish Cycle Count		Use this item to record the page count when the product was refurbished.
	Document Feeder Kit Count		Set the total number of pages that have been fed through the document feeder.
	Document Feeder Kit Interval		Total number of pages since the document feeder kit was replaced.
	Clean Rollers Count		

First level	Second level	Value	Description
	Clean Rollers Interval		
	ADF Count		Set the total pages fed through the document feeder.
	Flatbed Count		Set the total pages scanned from the flatbed.
	ADF Simplex Count		Set the total single-sided pages fed through the document feeder.
	ADF Duplex Count		Set the total two-sided pages fed through the document feeder.
	Copy Scan Count		Set the total copy pages that have been scanned.
	Send Scan Count		Set the number of scanned pages sent to email.
	Fax Scan Count		
	Copy Pages Count		Set the number of scanned pages that have been printed.
Scanner Settings	ADF Settings	Leading-edge Trailing-edge Left Side Front Left Side Back	Set the calibration values. **WARNING!** Do not change these values unless instructed to do so.
	Glass Settings	Leading edge glass Left Side Glass	
Serial Number			Set the serial number.
Service ID			Use this item to show the date that the product was first used on the control panel. This eliminates the need for users to keep paper receipts for proof of warranty.

First level	Second level	Value	Description
Cold Reset Paper			When you perform a cold reset, the paper size that is stored in NVRAM is reset to the default factory setting. If you replace a formatter board in a country/region that uses A4 as the standard paper size, use this menu to reset the default paper size to A4. LETTER and A4 are the only available values.
New Registration Roller		Yes No	Reset the counter for the registration roller after replacing the registration assembly.
PTT Test Mode (fax models only)			Test the internal modem for the analog fax accessory.
	Hook Operations	Off Hook On Hook	
	Generate Random Data	Select a value from the list.	
	Generate DTMF Tone Burst	Select a value from the list.	
	Generate DTMF Continuous Tone	Select a value from the list.	
	Generate Pulse Burst	Select a value from the list.	
	Generate Tone Dial Number	Enter dial number.	
	Generate Pulse Dial Number	Enter dial number.	
	Generate Single Modem Tone	Range: 1100–2100 Hz Default = 2100 Hz	
	Line Measurements		
	Fax Transmit Signal Loss		
Test Support	Continuous Scan	2-sided Save to Disk	

First level	Second level	Value	Description
	Continuous Copy	2-sided	
		Save to Disk	
	Raw Scan	2-sided	
		Mechanical Calibration	
	Continuous Print from USB		
	Automatic Calibrations	Disabled	
		Enabled*	

Product resets

Restore factory-set defaults

1. From the Home screen on the product control panel, scroll to and touch the Administration button.
2. Open the following menus:
   - General Settings
   - Restore Factory Settings
3. Select one or more categories of settings from the list, and then touch the Reset button.

Restore the service ID

Restore the service ID

If you replace the formatter, the date is lost. Use this menu item to reset the date to the original date that the product was first used. The date format is YYDDD. Use the following formula to calculate the dates:

1. To calculate YY, subtract 1990 from the calendar year. For instance, if the product was first used in 2002, calculate YY as follows: 2002 - 1990 = 12. YY = 12.
2. Subtract 1 from 10 (October is the tenth month of the year): 10 - 1 = 9.
   - Multiply 9 by 30: 9 x 30 = 270 or add 17 to 270: 270 + 17 = 287. Thus, DDD = 287.

Convert the service ID to an actual date

You can use the product Service ID number to determine whether the product is still under warranty. Use the following formula to convert the Service ID into the installation date as follows:

1. Add 1990 to YY to get the actual year that the product was installed.
2. Divide DDD by 30. If there is a remainder, add 1 to the result. This is the month.
3. The remainder from the calculation in step 2 is the date.

Using the Service ID 12287 as an example, the date conversion is as follows:

1. 12 + 1990 = 2002, so the year is 2002.
2. 287 divided by 30 = 9 with a remainder of 17. Because there is a remainder, add 1 to 9 to get 10, which represents October.
3. The remainder in step 2 is 17, so that is the date.
4. The complete date is 17-October-2002.

NOTE: A six-day grace period is built into the date system.

Product cold reset

Cold reset using the Preboot menu

1. Turn the product on.
2. Touch the HP logo that displays in the center of the touchscreen until the **Preboot** menu opens.
3. Use the down arrow ▼ button to highlight 3 Administrator, and then touch the OK button.
4. Use the down arrow ▼ button to highlight 8 Startup Options item, and then touch the OK button.
5. Use the down arrow ▼ button to highlight the 2 Cold Reset item, and then touch the OK button.
6. Touch the Home button to highlight 1 Continue, and then touch the OK button.

NOTE: The product will initialize.

Format Disk and Partial Clean functions

Active and repository firmware locations

The firmware bundle consists of multiple parts. The main components are the Windows CE Operating System and the product/peripheral firmware files.

There are two locations/partitions on the hard drive where the firmware components are stored:

- The Active – where the Operating System and firmware currently are executing
- The Repository – the recovery location

If the Active location is damaged, or a 3 Partial Clean was performed, the product automatically copies over the OS and firmware files from the Repository location and the product recovers.

If both the Active and Repository locations are damaged, or a 2 Format Disk was performed, then both locations are gone and the error message **99.09.67** displays on the control-panel display. The user must upload the firmware to the product in order for it to function again.

CAUTION: The 2 Format Disk option performs a disk initialization for the entire disk. The operating system, firmware files, and third party files (among other files) will be completely lost. HP does not recommend this action.

Partial Clean

The 3 Partial Clean option erases all partitions and data on the disk drive, except for the firmware repository where a backup copy of the firmware file is stored. This allows the disk drive to be reformatted without having to download a firmware upgrade file to return the product to a bootable state.

Characteristics of a Partial Clean

- Customer-defined settings, third-party solutions, firmware files, and the operating system are deleted.
- Rebooting the product restores the firmware files from the Repository location, but does not restore any customer-defined settings.
- For previous HP products, a Hard Disk Initialization is similar to executing the 3 Partial Clean function for this product.

CAUTION: HP recommends backing-up product configuration data before executing a 3 Partial Clean if you need to retain customer-defined settings. See the Backup/Restore item in the Device Maintenance menu.

Reasons for performing Partial Clean

- The product continually boots up in an error state.

NOTE: Try clearing the error prior to executing a 3 Partial Clean.

- The product will not respond to commands from the control panel.
- Executing the 3 Partial Clean function is helpful for troubleshooting hard disk problems.
- To reset the product by deleting all solutions and customer-defined settings.
- The product default settings are not properly working.

Execute a 3 Partial Clean

1. Turn the product on.
2. Touch the HP logo that displays in the center of the touchscreen until the **Preboot** menu opens.
3. Touch the down arrow ▼ button to highlight 3 Administrator, and then touch the OK button.
4. Use the down arrow ▼ button to highlight 3 Partial Clean, and then touch the OK button.
5. Touch the OK button again.
6. Touch the Home button to highlight 1 Continue, and then touch the OK button.

NOTE: The product initializes.

Format Disk

The 2 Format Disk option erases the entire disk drive.

CAUTION: After executing a 2 Format Disk option, the product is *not* bootable.

Characteristics of a Format Disk

- Customer-defined settings, third-party solutions, firmware files, and the operating system are deleted.

  NOTE: Rebooting the product *does not* restore the firmware files.

- Rebooting the product restores the firmware files from the Repository location, but does not restore any customer-defined settings.
- After executing the 2 Format Disk function, the message **99.09.67** displays on the control panel.
- After executing the 2 Format Disk function, the product firmware must be reloaded.

CAUTION: HP recommends that you do not use the 2 Format Disk option unless an error occurs and the solution in the product service manual recommends this solution. After executing the 2 Format Disk function, the product is unusable.

HP recommends backing-up product configuration data before executing a 2 Format Disk if you need to retain customer-defined settings. See the Backup/Restore item in the Device Maintenance menu.

Reasons for performing a Format Disk

- The product continually boots up in an error state.

  NOTE: Try clearing the error prior to executing a 2 Format Disk.

- The product will not respond to commands from the control panel.
- Executing the 2 Format Disk function is helpful for troubleshooting hard disk problems.
- To reset the product by deleting all solutions and customer-defined settings.

Execute a 2 Format Disk

1. Turn the product on.
2. Touch the HP logo that displays in the center of the touchscreen until the **Preboot** menu opens.
3. Use the down arrow ▼ button to highlight 3 Administrator, and then touch the OK button.
4. Use the down arrow ▼ button to highlight 2 Format Disk, and then touch the OK button.
5. Touch the OK button again.

   NOTE: When the 2 Format Disk operation is complete, you will need to reload the product firmware.

Solve fax problems

Checklist for solving fax problems

Use the following checklist to help identify the cause of any fax-related problems you encounter:

- **Are you using the fax cable supplied with the fax accessory?** This fax accessory has been tested with the supplied fax cable to meet RJ11 and functional specifications. Do not substitute another fax cable; the analog-fax accessory requires an analog-fax cable. It also requires an analog phone connection.
- **Is the fax/phone line connector seated in the outlet on the fax accessory?** Make sure that the phone jack is correctly seated in the outlet. Insert the connector into the outlet until it "clicks."
- **Is the phone wall jack working properly?** Verify that a dial tone exists by attaching a phone to the wall jack. Can you hear a dial tone, and can you make or receive a phone call?

What type of phone line are you using?

- **Dedicated line:** A standard analog fax/phone line assigned to receive or send faxes.

NOTE: The phone line should be for product fax use only and not shared with other types of telephone devices. Examples include alarm systems that use the phone line for notifications to a monitoring company.

- **PBX system:** A business-environment phone system. Standard home phones and the fax accessory use an analog phone signal. Some PBX systems are digital and might not be compatible with the fax accessory. You need to have access to a standard analog phone connection to be able to send and receive faxes.
- **Roll-over lines:** A phone system feature where a new call "rolls over" to the next available line when the first incoming line is busy. Try attaching the product to the first incoming phone line. The fax accessory answers the phone after it rings the number of times set in the rings-to-answer setting.

NOTE: Roll-over lines can cause problems with receiving faxes. Using roll-over lines with this product is not recommended.

NOTE: Roll-over lines can cause problems with receiving faxes. Using roll-over lines with this product is not recommended.

Are you using a surge-protection device?

A surge-protection device can be used between the wall jack and the fax accessory to protect the fax accessory against electrical power passed through the phone lines. These devices can cause some fax communication problems by degrading the quality of the phone signal. If you are having problems sending or receiving faxes and are using one of these devices, connect the product directly to the phone jack on the wall to determine whether the problem is with the surge-protection device.

Are you using a phone company voice-messaging service or an answering machine?

If the rings-to-answer setting for the messaging service is lower than the rings-to-answer setting for the fax accessory, the messaging service answers the call, and the fax accessory cannot receive faxes. If the rings-to-answer setting for the fax accessory is lower than that of the messaging service, the fax accessory answers all calls.

Does your phone line have a call-waiting feature?

If the fax telephone line has an activated call-waiting feature, a call-waiting notice can interrupt a fax call in progress, which causes a communication error. Ensure that a call-waiting feature is not active on the fax telephone line.

Check fax accessory status

If the analog-fax accessory does not appear to be functioning, print a Configuration page report to check the status.

1. From the Home screen, scroll to and touch the Administration button.
2. Open the following menus:
   - Reports
   - Configuration/Status Pages
   - Configuration page
3. Touch the Print button to print the report, or touch the View button to view the report on the screen. The report consists of several pages.

NOTE: The product IP address or host name is listed on the Jetdirect Page.

On the Fax Accessory Page of the Configuration Page, under the Hardware Information heading, check the Modem Status. The following table identifies the status conditions and possible solutions.

NOTE: If the Fax Accessory Page does not print, there might be a problem with the analog fax accessory. If you are using LAN fax or Internet fax, those configurations could be disabling the feature.

Operational / Enabled[1]	The analog-fax accessory is installed and ready.
Operational / Disabled[1]	The fax accessory is installed, but you have not configured the required fax settings yet. The fax accessory is installed and operational; however, the HP Digital Sending utility has either disabled the product fax feature or has enabled LAN fax. When LAN fax is enabled, the analog-fax feature is disabled. Only one fax feature, either LAN fax or analog fax, can be enabled at a time. **NOTE:** If LAN fax is enabled, the Fax feature is unavailable on the product control panel.
Non-Operational / Enabled/Disabled[1]	The product has detected a firmware failure. Upgrade the firmware.
Damaged / Enabled/Disabled[1]	The fax accessory has failed. Reseat the fax accessory card and check for bent pins. If the status is still DAMAGED, replace the analog-fax accessory card.

[1] ENABLED indicates that the analog-fax accessory is enabled and turned on; DISABLED indicates that LAN fax is enabled (analog fax is turned off).

General fax problems

Problem	Cause	Solution
The fax failed to send.	JBIG is enabled, and the receiving fax machine does not have JBIG capability.	Turn off the JBIG setting.
An "Out of Memory" status message displays on the product control panel.	The product storage disk is full.	Delete some stored jobs from the disk. From the Home screen on the product control panel, touch the Retrieve from Device Memory button. Open the list of stored jobs or stored faxes. Select a job to delete, and then touch the Delete button.
Print quality of a photo is poor or prints as a gray box.	You are using the wrong page-content setting or the wrong resolution setting.	Try setting the Optimize Text/Picture option to Photograph setting.
You touched the Stop button on the product control panel to cancel a fax transmission, but the fax was still sent.	If the job is too far along in the sending process, you cannot cancel the job.	This is normal operation.
No fax address book button displays.	The fax address book feature has not been enabled.	Use the HP MFP Digital Sending Software Configuration utility to enable the fax address book feature.
Not able to locate the Fax settings in HP Web Jetadmin.	Fax settings in HP Web Jetadmin are located under the device's status page drop-down menu.	Select **Digital Sending and Fax** from the drop-down menu.
The header is appended to the top of the page when the overlay option is enabled.	For all forwarded faxes, the product appends the overlay header to the top of a page.	This is normal operation.
A mix of names and numbers is in the recipients box.	Names and numbers can both display, depending on where they are from. The fax address book lists names, and all other databases list numbers.	This is normal operation.
A one-page fax prints as two pages.	The fax header is being appended to the top of the fax, pushing text to a second page.	To print a one page fax on one page, set the overlay header to overlay mode, or adjust the fit-to-page setting.
A document stops in the document feeder in the middle of faxing.	A jam is in the document feeder.	Clear the jam, and send the fax again.
The volume for sounds coming from the fax accessory is too high or too low.	The volume setting needs to be adjusted.	Adjust the volume in the Fax Send Settings menu and the Fax Receive Settings menu.

Use Fax over VoIP networks

VoIP technology converts the analog phone signal into digital bits. These are then assembled into packets which travel on the Internet. The packets are converted and transmitted back to analog signals at or near the destination.

Transmission of information on the Internet is digital instead of analog. Therefore, there are different constraints on the fax transmission that might require different fax settings than the analog Public Switched Telephone Network (PSTN). Fax is very dependent upon timing and signal quality, so a fax transmission is more sensitive to a VoIP environment.

The following are suggested changes in settings for the HP LaserJet Analog Fax Accessory 500 when it is connected to a VoIP service:

- Begin with the fax speed set in Fast (V.34) mode and with Error Correction Mode (ECM) turned on. The V.34 protocol handles any changes in transmission speed needed to accommodate VoIP networks.
- If numerous errors or retries occur with the fax speed set to Fast, set it to Medium (V.17).
- If errors and retries persist, set the fax speed to Slow (V.29) because some VoIP systems cannot handle the higher signal rates associated with fax.
- In rare cases, if errors persist, turn off ECM on the product. The image quality might decrease. Ensure that the image quality is acceptable with ECM off before using this setting.
- If the preceding setting changes have not improved the VoIP fax reliability, contact your VoIP provider for help.

Problems with receiving faxes

Problem	Cause	Solution
Incoming fax calls are not being answered by the fax accessory (no fax detected).	The rings-to-answer setting might not be set correctly.	Check the rings-to-answer setting.
	The fax cable might not be connected correctly, or the fax cable is not working.	Check the installation. Make sure you are using the fax cable that came with the product or with the fax accessory.
	The phone line might not be working.	Disconnect the fax accessory from the phone jack, and then connect a phone. Try to make a phone call to ensure the phone line is working.
	If you are using a PBX system, the ring signals might not be configured correctly.	Check the ring-signal configuration on the PBX system.
	A voice-messaging service might be interfering with incoming faxes.	Do one of the following: • Discontinue the messaging service. • Use a phone line dedicated to fax calls. • Decrease the rings-to-answer for the fax accessory to a number less than the rings-to-answer for the voice mail.
Faxes are being received very slowly.	You might be receiving a complex fax, such as one with many graphics.	Complex faxes take longer to transmit.
	The sending fax machine might have a slow modem speed.	The fax accessory only receives the fax at the fastest modem speed the sending fax machine can use. Wait for the fax transmission to complete.
	The resolution at which the fax was sent or is being received is very high. A higher resolution typically results in better quality, but also requires a longer transmission time.	Ask the sender to decrease the resolution and resend the fax.
	If there is a poor phone-line connection, the fax accessory and the sending fax machine slow down the transmission to adjust for errors.	Ask the sender to resend the fax. Ask the phone company to check the phone line.
Faxes are not printing on the product.	No paper is in the input tray.	Load paper. Any faxes received while the input tray is empty are stored and will print after the tray has paper.
	The Fax Printing Schedule feature is in use.	Faxes print according to the schedule. To print faxes immediately, disable the Fax Printing Schedule feature.

Problem	Cause	Solution
	The product is either low on toner or has run out of toner.	If configured, the product stops printing as soon as it is low on toner or runs out of toner. Any faxes received are stored in memory and print after the toner has been replaced.
	The incoming call might be a voice call.	Incoming voice calls usually show up in the call report as a **No Fax Detected** error. Because these are voice calls and not a fax error, no action is necessary.
	The incoming fax was interrupted.	Verify that the fax telephone line does not have an activated call-waiting feature. A call-waiting notice can interrupt a fax call in progress, which causes a communication error.
	The Fax Printing Schedule feature is set to the Always store faxes option.	Change the Fax Printing Schedule setting to the Always print faxes option.

Problems with sending faxes

Problem	Cause	Solution
Faxes are transmitting very slowly.	You might be sending a complex fax, such as one with many graphics.	Complex faxes take longer to transmit.
	The receiving fax machine might have a slow modem speed.	The fax accessory only sends the fax at the fastest modem speed the receiving fax machine can use. Wait for the fax transmission to complete.
	The resolution at which the fax was sent or is being received is very high. A higher resolution typically results in better quality, but also requires a longer transmission time.	Decrease the resolution and change the Optimize Text/Picture option.
	If there is a poor phone-line connection, the fax accessory and the receiving fax machine slow down the transmission to adjust for errors.	Cancel and resend the fax. Ask the phone company check the phone line.
	The document might have a gray background, which can increase fax transmission time.	Use the Image Adjustment feature to clean up the background shading.
Faxes quit during sending.	The receiving fax machine might be malfunctioning.	Try sending to another fax machine.
	The phone line might not be working.	Disconnect the fax accessory from the phone jack, and connect a phone. Try to make a phone call to ensure the phone line is working.
	The phone line might be noisy or poor quality.	Try using a slower fax speed to improve the reliability of transmission. Use the Fax Dialing Settings menu to set the fax speed for sending faxes.
	A call-waiting feature might be active.	Verify that the fax telephone line does not have an activated call-waiting feature. A call-waiting notice can interrupt a fax call in progress, which causes a communication error.
The fax accessory is receiving faxes but is not sending them.	If the fax accessory is on a PBX system, the PBX system might be generating a dial tone the fax accessory cannot detect.	Disable the detect-dial-tone setting.
	There might be a poor phone connection.	Try again later.
	The receiving fax machine might be malfunctioning.	Try sending to another fax machine.
	The phone line might not be working.	Disconnect the fax accessory from the phone jack, and connect a phone. Try to make a phone call to ensure the phone line is working.

Problem	Cause	Solution
Outgoing fax calls keep dialing.	The fax accessory automatically redials a fax number if the Redial on Busy option is on or if the Redial on No Answer option is on.	This is normal operation. If you do not want the fax to retry, set the Redial on Busy option to 0, set the Redial on No Answer option to 0, and set the Redial on Error option to 0.
Faxes you send are not arriving at the receiving fax machine.	The receiving fax machine might be turned off or might have an error condition, such as being out of paper.	Ask the recipient to make sure the fax machine is turned on and ready to receive faxes.
	A fax might be in memory because it is waiting to redial a busy number, or there are other jobs ahead of it waiting to be sent.	If a fax job is in memory for either of these reasons, an entry for the job displays in the fax log. Print the fax activity log, and check the **Result** column for jobs with a **Pending** designation.

Fax error codes

If a fax problem occurs which prevents or interrupts fax transmission, an error code is generated that can help in determining the cause of the problem. Error codes show up in the fax activity log, the fax call report, and the T.30 Protocol Trace. Print one of these reports to obtain the error code. A detailed description of the error codes and the appropriate action is available at www.hp.com. Search for HP LaserJet Analog Fax Accessory 500.

Fax error messages on the product control panel

If the fax process is interrupted or an error occurs during a fax transmission or reception, a two-part status/error description is generated by the fax subsystem on the product. Normal or successful faxes also generate messages indicating success. The message information consists of a text description and a numeric code (a few messages do not include numeric codes). Only the text part of the message is displayed on the product control panel; however, both the text message and numeric code are listed in the Fax Activity Report, Fax Call Report, and the Fax T.30 Trace. The numeric code is shown in parentheses after the text part of the message in the reports.

The fax modem generates the numeric code. Usually a numeric code of (0) indicates a normal modem response. Some messages always display a numeric code of (0), other messages can have a range of numeric codes, and a few messages have no numeric code. Usually a numeric code of (0) indicates an error was not associated with the fax modem, but occurred in another part of the fax system or other product sytem such as the printing system. Non-zero error codes give further detail into the particular action or process that the modem is executing, and they do not necessarily indicate that there is a problem with the modem.

Persistent error messages with numeric codes different than those listed here require assistance of customer support. Print a Fax T.30 Trace report before contacting customer support to help identify the problem. This report contains details of the last fax call.

1. From the Home screen on the product control panel, scroll to and touch the Administration button.
2. Open the following menus:
   - Troubleshooting
   - Fax
   - Fax T.30 Trace
3. Select the Print T.30 Report option to print the report.

Send-fax messages

Table 2-34 Send-fax messages

Message	Error No.	Description	Action
Cancelled	0	Someone cancelled the fax at the product control panel.	None.
Success	n/a	The fax was sent successfully.	None.
Fail Busy	0	The receiving fax machine is busy.	The fax will be retired automatically (if configured), otherwise try resending fax later.
No Answer	0 or 17	The receiving fax machine is not answering the call, or a person answered the call.	The receiving fax machine might be disconnected or turned off; contact the receiver to check the machine. Try resending.
No Dial	0	No dial tone is detected when sending the fax.	Verify the phone line is active; set the sending fax to "not" to detect a dial tone.
Failed	Any	The fax might be corrupted or not sent.	Try resending fax.
Failed	0	Incompatible page width, or page had too many bad lines.	Try resending fax; if the error persists, contact service.
Failed	17 or 36	Lost telephone connection between sender and receiver. The issue might be due to voice calls interrupting the fax, or a person answering the call.	Try resending the fax.
Failed or **Communication Error**	Any besides 17 or 36	General communications issue where the fax transmission was interrupted or did not proceed as expected.	Try resending fax; if the error persists, contact support.
Space Fail	0	Unable to read or write the fax image file to disk; could be corrupt product disk or no space available on the product's disk.	Try resending fax; if the error persists, contact support.
Memory Error	0	Out of memory on product.	If the error persists, delete items from the product memory, such as stored jobs or saved faxes.
Power Failure	0	A power failure occurred on the sending fax product during the fax transmission.	Try resending the fax.

Receive-fax messages

Table 2-35 Receive-fax messages

Message	Error No.	Description	Action
Success	n/a	The fax transmission was successful.	None.
Blocked	n/a	The receiving fax machine is using the blocked-number feature and is blocking this fax.	None.
Failed	Any	The fax might be corrupted or not sent.	Ask the sender to resend the fax; if the error persists, contact support.
Failed	0	Incompatible page width or page had too many bad lines.	Ask the sender to resend the fax; if the error persists, contact support.
Failed	17, 36	Lost telephone connection or interruption between sender/ receiver.	Ask the sender to resend the fax (if the sending machine does not automatically retry).
Failed	Any besides 17 or 36	General communications issue where the fax transmission was interrupted or did not proceed as expected.	Ask the sender to resend the fax; if the error persists, contact support.
Space Fail	0	Unable to read or write image file to disk; could be corrupt product disk or no space on disk.	Ask the sender to resend the fax; if the error persists, contact support.
Memory Error	0	Out of memory on product.	If the error persists, delete items from the product memory, such as stored jobs or saved faxes.
Print Fail	0	The received image file cannot be decoded.	Ask the sender to resend the fax; enable Error Correction Mode if it is not already enabled.
Power Failure	0	A power failure occurred during the fax reception.	Ask the sender to resend the fax.
No Fax Detected	17, 36	A voice call was made to the fax.	None

Service settings

These items in the control-panel menus are intended to be used when an HP service representative is assisting you.

Settings in the Troubleshooting menu

1. From the Home screen on the product control panel, scroll to and touch the Administration button.
2. Open the following menus:
   - Troubleshooting
   - Fax

Fax T.30 Trace	This is a printed report of all the communications between the sending and receiving fax machines for the last Fax transmission or reception. The report contains detailed error codes and other information that might be useful in troubleshooting a particular problem related to sending or receiving a fax. Print this report before contacting HP customer support.
Fax V.34	This setting controls the modem's method of transmission. The Normal setting allows the modem to select any of the supported fax speeds up to 33,600 bps. The Off setting sets the fax speed to 14,400 bps or lower, depending on the speed settings for sending and receiving.
Fax Speaker Mode	In Normal mode, the modem speaker is turned on during dialing, through the initial connection, and then it turns off. In Diagnostic mode, the speaker is turned on and remains on for all fax communications until the setting is returned to Normal mode.
Fax Log Entries	The Standard fax log includes basic information such as the time and whether the fax was successful. The Detailed fax log shows the intermediate results of the redial process not shown in the Standard fax log.

Product upgrades

To download the most recent firmware upgrade for the product, go to www.hp.com/go/lj500MFPM525_firmware.

Determine the installed revision of firmware

Print a configuration page to determine the installed revision of firmware.

On the configuration page, look in the section marked Device Information for the firmware datecode and firmware revision.

Firmware datecode and firmware revision examples

- 20100831 (firmware datecode)
- 103067_104746 (firmware revision)

Perform a firmware upgrade

The firmware bundle is a `xxxxxxx.bdl` file. This file requires an interactive upgrade method. You cannot upgrade the product using the traditional FTP, LPR or Port 9100 methods of upgrading. Use one of the following methods to upgrade the firmware for this product.

Embedded Web Server

1. Open an browser window.
2. Enter the product IP address in the URL line.
3. Select the **Firmware Upgrade** link from within the **Troubleshooting** tab.

NOTE: If you get a warning screen, follow the instructions for setting an administrator password from the **Security** tab.

4. Browse to the location that the firmware upgrade file was downloaded to, and then select the firmware file. Select the Install button to perform the upgrade.

NOTE: Do not close the browser window until the Embedded Web Server (EWS) displays the confirmation page.

5. Select **Restart Now** from the EWS confirmation page, or turn the product off, and then on again using the power switch.

USB storage device (Preboot menu)

1. Copy the firmware upgrade file to the root directory of a USB flash drive. The firmware upgrade file has a .bdl extension.
2. Insert the USB flash drive into the USB port on the product control panel.
3. Turn the product on.
4. Touch the HP logo that displays in the center of the touchscreen until the **Preboot** menu opens.
5. Wait for the Pre-Boot menu to appear on the control-panel display, and then touch the down arrow ▼ button to scroll toAdministrator. Touch the OK button to select it.
6. Touch thedown arrow ▼ button to scroll to Manage Disk. Touch the OK button to select it.
7. Touch the down arrow ▼ button to scroll to Clear Disk Pwd. Touch the OK button to select it.
8. The message **Proceed with Requested Action** displays. Touch the OK button to select it.
9. Touch the back arrow ⮌ button to return to the Pre-Boot menu home screen.
10. Touch the down arrow ▼ button to scroll to Administrator. Touch the OK button to select it.
11. Touch thedown arrow ▼ button to scroll to Download. Touch the OK button to select it.
12. Touch the down arrow ▼ button to scroll to USB Thumbdrive. Touch the OK button to select it.
13. Several .bdl files might be listed. Touch thedown arrow ▼ button to scroll to the firmware upgrade file that you downloaded. Touch the OK button to select it.

NOTE: If no .bdl files are listed, try saving the file to a different USB flash drive.

14. Wait while the file transfers. When the transfer is complete, the message **Complete** displays on the screen.
15. Turn the product off, remove the USB flash drive, and then turn the product on. Wait for several minutes while the product initializes.
    - If the upgrade is unsuccessful, try sending the firmware upgrade file again.
    - If the upgrade fails again, contact HP support at www.hp.com/support/lj500MFPM525.

USB storage device (control-panel menu)

1. Copy the `xxxxxxx.bdl` file to a portable USB flash drive.
2. Turn the product on, and then wait until it reaches the Ready state.
3. From the Home screen on the product control panel, scroll to and touch the Device Maintenance button.
4. Touch the USB Firmware Upgrade button.
5. Insert the portable USB storage device with the `xxxxxxx.bdl` file on it into the USB port on the front of the product, and then touch the OK button.
6. Touch the `xxxxxxx.bdl` file, and then touch the Upgrade button.

TIP: If there is more than one `xxxxxxx.bdl` file on the storage device, make sure that you select the correct file for this product.

7. When the product prompts you to confirm the upgrade, touch the Upgrade button.

   When the upgrade is complete, the product will initialize.

NOTE: The upgrade process can take up to 10 minutes to complete.

8. When the upgrade process is complete, print a configuration page and verify that the upgrade firmware version was installed.

A Service and support

- Hewlett-Packard limited warranty statement
- HP's Premium Protection Warranty: LaserJet toner cartridge limited warranty statement
- HP policy on non-HP supplies
- HP anticounterfeit Web site
- Data stored on the toner cartridge
- End User License Agreement
- OpenSSL
- Customer self-repair warranty service
- Customer support

Hewlett-Packard limited warranty statement

HP PRODUCT	DURATION OF LIMITED WARRANTY
HP LaserJet Enterprise 500 MFP M525dn, M525f	One-year on-site warranty

HP warrants to you, the end-user customer, that HP hardware and accessories will be free from defects in materials and workmanship after the date of purchase, for the period specified above. If HP receives notice of such defects during the warranty period, HP will, at its option, either repair or replace products which prove to be defective. Replacement products may be either new or equivalent in performance to new.

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HP's Premium Protection Warranty: LaserJet toner cartridge limited warranty statement

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This warranty does not apply to products that (a) have been refilled, refurbished, remanufactured or tampered with in any way, (b) experience problems resulting from misuse, improper storage, or operation outside of the published environmental specifications for the printer product or (c) exhibit wear from ordinary use.

To obtain warranty service, please return the product to place of purchase (with a written description of the problem and print samples) or contact HP customer support. At HP's option, HP will either replace products that prove to be defective or refund your purchase price.

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HP policy on non-HP supplies

Hewlett-Packard Company cannot recommend the use of non-HP toner cartridges, either new or remanufactured.

NOTE: For HP printer products, the use of a non-HP toner cartridge or a refilled toner cartridge does not affect either the warranty to the customer or any HP support contract with the customer. However, if product failure or damage is attributable to the use of a non-HP toner cartridge or refilled toner cartridge, HP will charge its standard time and materials charges to service the product for the particular failure or damage.

HP anticounterfeit Web site

Go to www.hp.com/go/anticounterfeit when you install an HP toner cartridge and the control-panel message says the cartridge is non-HP. HP will help determine if the cartridge is genuine and take steps to resolve the problem.

Your toner cartridge might not be a genuine HP toner cartridge if you notice the following:

- The supplies status page indicates that a non-HP supply is installed.
- You are experiencing a high number of problems with the cartridge.
- The cartridge does not look like it usually does (for example, the packaging differs from HP packaging).

Data stored on the toner cartridge

The HP toner cartridges used with this product contain a memory chip that assists in the operation of the product.

In addition, this memory chip collects a limited set of information about the usage of the product, which might include the following: the date when the toner cartridge was first installed, the date when the toner cartridge was last used, the number of pages printed using the toner cartridge, the page coverage, the printing modes used, any printing errors that might have occurred, and the product model. This information helps HP design future products to meet our customers' printing needs.

The data collected from the toner cartridge memory chip does not contain information that can be used to identify a customer or user of the toner cartridge or their product.

HP collects a sampling of the memory chips from toner cartridges returned to HP's free return and recycling program (HP Planet Partners: www.hp.com/recycle). The memory chips from this sampling are read and studied in order to improve future HP products. HP partners who assist in recycling this toner cartridge might have access to this data, as well.

Any third party possessing the toner cartridge might have access to the anonymous information on the memory chip.

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Rev. 04/09

OpenSSL

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (http://www.openssl.org/)

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LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

This product includes cryptographic software written by Eric Young (eay@cryptsoft.com). This product includes software written by Tim Hudson (tjh@cryptsoft.com).

Customer self-repair warranty service

HP products are designed with many Customer Self Repair (CSR) parts to minimize repair time and allow for greater flexibility in performing defective parts replacement. If during the diagnosis period, HP identifies that the repair can be accomplished by the use of a CSR part, HP will ship that part directly to you for replacement. There are two categories of CSR parts: 1) Parts for which customer self repair is mandatory. If you request HP to replace these parts, you will be charged for the travel and labor costs of this service. 2) Parts for which customer self repair is optional. These parts are also designed for Customer Self Repair. If, however, you require that HP replace them for you, this may be done at no additional charge under the type of warranty service designated for your product.

Based on availability and where geography permits, CSR parts will be shipped for next business day delivery. Same-day or four-hour delivery may be offered at an additional charge where geography permits. If assistance is required, you can call the HP Technical Support Center and a technician will help you over the phone. HP specifies in the materials shipped with a replacement CSR part whether a defective part must be returned to HP. In cases where it is required to return the defective part to HP, you must ship the defective part back to HP within a defined period of time, normally five (5) business days. The defective part must be returned with the associated documentation in the provided shipping material. Failure to return the defective part may result in HP billing you for the replacement. With a customer self repair, HP will pay all shipping and part return costs and determine the courier/carrier to be used.

Customer support

Get telephone support for your country/region Have the product name, serial number, date of purchase, and problem description ready.	Country/region phone numbers are on the flyer that was in the box with your product or at www.hp.com/support/.
Get 24-hour Internet support	www.hp.com/support/lj500MFPM525
Download software utilities, drivers, and electronic information	www.hp.com/go/lj500MFPM525_software
Order additional HP service or maintenance agreements	www.hp.com/go/carepack
Register your product	www.register.hp.com

B Product specifications

- Physical specifications
- Power consumption, electrical specifications, and acoustic emissions
- Environmental specifications

Physical specifications

Table B-1 Physical specifications

Product	Height	Depth	Width	Weight
M525dn	576 mm (22.7 in)	547 mm (21.5 in)	516 mm (20.3 in)	29.7 kg (65.5 lb)
M525f	576 mm (22.7 in)	547 mm (21.5 in)	517 mm (20.4 in)	29.7 kg (65.5 lb)

Power consumption, electrical specifications, and acoustic emissions

See www.hp.com/go/lj500MFPM525_regulatory for current information.

⚠ **CAUTION:** Power requirements are based on the country/region where the product is sold. Do not convert operating voltages. This will damage the product and void the product warranty.

Environmental specifications

Table B-2 Operating-environment specifications

Environment	Recommended	Allowed
Temperature	17° to 25°C (62.6° to 77°F)	15° to 30°C (59° to 86°F)
Relative humidity	30% to 70% relative humidity (RH)	10% to 80% RH
Altitude	Not applicable	0 to 3048 m (0 to 10,000 ft)

C Regulatory information

- FCC regulations
- Environmental product stewardship program
- Declaration of conformity
- Declaration of conformity (fax models)
- Certificate of Volatility
- Safety statements
- Additional statements for telecom (fax) products

FCC regulations

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

NOTE: Any changes or modifications to the printer that are not expressly approved by HP could void the user's authority to operate this equipment.

Use of a shielded interface cable is required to comply with the Class A limits of Part 15 of FCC rules.

Environmental product stewardship program

Protecting the environment

Hewlett-Packard Company is committed to providing quality products in an environmentally sound manner. This product has been designed with several attributes to minimize impacts on our environment.

Ozone production

This product generates no appreciable ozone gas (O_3).

Power consumption

Power usage drops significantly while in Ready or Sleep mode, which saves natural resources and saves money without affecting the high performance of this product. Hewlett-Packard printing and imaging equipment marked with the ENERGY STAR® logo is qualified to the U.S. Environmental Protection Agency's ENERGY STAR specifications for imaging equipment. The following mark will appear on ENERGY STAR qualified imaging products:

Additional ENERGY STAR qualified imaging product model information is listed at:

www.hp.com/go/energystar

Toner consumption

EconoMode uses less toner, which might extend the life of the toner cartridge. HP does not recommend the full-time use of EconoMode. If EconoMode is used full-time, the toner supply might outlast the mechanical parts in the toner cartridge. If print quality begins to degrade and is no longer acceptable, consider replacing the toner cartridge.

Paper use

This product's manual/automatic duplex feature (two-sided printing) and N-up printing (multiple pages printed on one page) capability can reduce paper usage and the resulting demands on natural resources.

Plastics

Plastic parts over 25 grams are marked according to international standards that enhance the ability to identify plastics for recycling purposes at the end of the product's life.

HP LaserJet print supplies

It's easy to return and recycle your HP LaserJet toner cartridges after use—free of charge—with HP Planet Partners. Multilingual program information and instructions are included in every new HP LaserJet toner cartridge and supplies package. You help reduce the toll on the environment further when you return multiple cartridges together rather than separately.

HP is committed to providing inventive, high-quality products and services that are environmentally sound, from product design and manufacturing to distribution, customer use and recycling. When you participate in the HP Planet Partners program, we ensure your HP LaserJet toner cartridges are recycled properly, processing them to recover plastics and metals for new products and diverting millions of tons of waste from landfills. Since this cartridge is being recycled and used in new materials, it will not be returned to you. Thank you for being environmentally responsible!

NOTE: Use the return label to return original HP LaserJet toner cartridges only. Please do not use this label for HP inkjet cartridges, non-HP cartridges, refilled or remanufactured cartridges or warranty returns. For information about recycling your HP inkjet cartridges please go to http://www.hp.com/recycle.

Return and recycling instructions

United States and Puerto Rico

The enclosed label in the HP LaserJet toner cartridge box is for the return and recycling of one or more HP LaserJet toner cartridges after use. Please follow the applicable instructions below.

Multiple returns (more than one cartridge)

1. Package each HP LaserJet toner cartridge in its original box and bag.
2. Tape the boxes together using strapping or packaging tape. The package can weigh up to 31 kg (70 lb).
3. Use a single pre-paid shipping label.

OR

1. Use your own suitable box, or request a free bulk collection box from www.hp.com/recycle or 1-800-340-2445 (holds up to 31 kg (70 lb) of HP LaserJet toner cartridges).
2. Use a single pre-paid shipping label.

Single returns

1. Package the HP LaserJet toner cartridge in its original bag and box.
2. Place the shipping label on the front of the box.

Shipping

For US and Puerto Rico HP LaserJet toner cartridge recycling returns, use the pre-paid, pre-addressed shipping label contained in the box. To use the UPS label, give the package to the UPS driver during

your next delivery or pick-up, or take it to an authorized UPS drop-off center. (Requested UPS Ground pickup will be charged normal pick-up rates) For the location of your local UPS drop-off center, call 1-800-PICKUPS or visit www.ups.com.

If you are returning the package with the FedEx label, give the package to either the U.S. Postal Service carrier or FedEx driver during your next pick-up or delivery. (Requested FedEx Ground pickup will be charged normal pick-up rates). Or, you can drop off your packaged toner cartridge(s) at any U.S. Post Office or any FedEx shipping center or store. For the location of your nearest U.S. Post Office, please call 1-800-ASK-USPS or visit www.usps.com. For the location of your nearest FedEx shipping center/ store, please call 1-800-GOFEDEX or visit www.fedex.com.

For more information, or to order additional labels or boxes for bulk returns, visit www.hp.com/recycle or call 1-800-340-2445. Information subject to change without notice.

Residents of Alaska and Hawaii

Do not use the UPS label. Call 1-800-340-2445 for information and instructions. The U.S. Postal Service provides no-cost cartridge return transportation services under an arrangement with HP for Alaska and Hawaii.

Non-U.S. returns

To participate in HP Planet Partners return and recycling program, just follow the simple directions in the recycling guide (found inside the packaging of your new product supply item) or visit www.hp.com/recycle. Select your country/region for information on how to return your HP LaserJet printing supplies.

Paper

This product is capable of using recycled papers when the paper meets the guidelines outlined in the *HP LaserJet Printer Family Print Media Guide*. This product is suitable for the use of recycled paper according to EN12281:2002.

Material restrictions

This HP product does not contain added mercury.

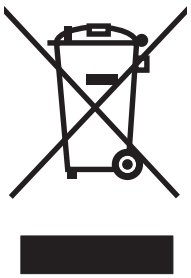
This HP product contains a battery that might require special handling at end-of-life. The batteries contained in or supplied by Hewlett-Packard for this product include the following:

HP LaserJet Enterprise 500 MFP M525	
Type	Carbon monofluoride lithium
Weight	0.8 g
Location	On formatter board
User-removable	No

廢電池請回收

For recycling information, you can go to www.hp.com/recycle, or contact your local authorities or the Electronics Industries Alliance: www.eiae.org.

Disposal of waste equipment by users



This symbol means do not dispose of your product with your other household waste. Instead, you should protect human health and the environment by handing over your waste equipment to a designated collection point for the recycling of waste electrical and electronic equipment. For more information, please contact your household waste disposal service, or go to: www.hp.com/recycle.

Electronic hardware recycling

HP encourages customers to recycle used electronic hardware. For more information about recycling programs go to: www.hp.com/recycle.

Chemical substances

HP is committed to providing our customers with information about the chemical substances in our products as needed to comply with legal requirements such as REACH (Regulation EC No 1907/2006 of the European Parliament and the Council). A chemical information report for this product can be found at: www.hp.com/go/reach.

Material Safety Data Sheet (MSDS)

Material Safety Data Sheets (MSDS) for supplies containing chemical substances (for example, toner) can be obtained by accessing the HP Web site at www.hp.com/go/msds or www.hp.com/hpinfo/community/environment/productinfo/safety.

For more information

To obtain information about these environmental topics:

- Product environmental profile sheet for this and many related HP products
- HP's commitment to the environment

- HP's environmental management system
- HP's end-of-life product return and recycling program
- Material Safety Data Sheets

Visit www.hp.com/go/environment or www.hp.com/hpinfo/globalcitizenship/environment.

Declaration of conformity

Declaration of Conformity

according to ISO/IEC 17050-1 and EN 17050-1

Manufacturer's Name:	Hewlett-Packard Company	DoC#: BOISB-1107-00 Rel.1.0
Manufacturer's Address:	11311 Chinden Boulevard	
	Boise, Idaho 83714-1021, USA	

declares, that the product

Product Name:	HP LaserJet Enterprise 500 MFP M525dn
Regulatory Model Numbers:[2)]	BOISB-1107-00
Product Options:	All
Toner Cartridges:	CE255A, CE255X

conforms to the following Product Specifications:

SAFETY:	IEC 60950-1:2005 / EN60950-1: 2006 +A11 +A1
	IEC 60825-1:2007 / EN 60825-1:2007 (Class 1 Laser/LED Product)
	IEC 62479:2010 / EN62479:2010
	GB4943-2001
EMC:	CISPR22:2005 +A1/ EN55022:2006 +A1 - Class A[1), 3)]
	EN 61000-3-2:2006 +A1:2009 +A2:2009
	EN 61000-3-3:2008
	EN 55024:1998 +A1 +A2
	FCC Title 47 CFR, Part 15 Class A / ICES-003, Issue 4
	GB9254-2008, GB17625.1-2003

Supplementary Information:

The product herewith complies with the requirements of the R&TTE Directive 1999/5/EC Annex II and Annex IV, EMC Directive 2004/108/EC, the Low Voltage Directive 2006/95/EC, and carries the CE-Marking CE accordingly.

This Device complies with Part 15 of the FCC Rules. Operation is subject to the following two Conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

1. The product was tested in a typical configuration with Hewlett-Packard Personal Computer Systems.
2. For regulatory purposes, these products are assigned a Regulatory model number. This number should not be confused with the product name or the product number(s).
3. The product meets the requirements of EN55022 & CNS 13438 Class A in which case the following applies: "Warning — This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.".

Boise, Idaho USA

July 27 2011

For Regulatory Topics only, contact:

European Contact:	Your Local Hewlett-Packard Sales and Service Office or Hewlett-Packard Gmbh, Hewlett-Packard GmbH, HQ-TRE, Herrenberger Straße 140, 71034 Böblingen, Germany www.hp.eu/certificates
USA Contact:	Product Regulations Manager, Hewlett-Packard Company, PO Box 15, Mail Stop 160, Boise, Idaho 83707-0015 (Phone: 208-396-6000)

Declaration of conformity (fax models)

Declaration of Conformity

according to ISO/IEC 17050-1 and EN 17050-1

Manufacturer's Name:	Hewlett-Packard Company	DoC#: BOISB-1107-01 Rel.1.0
Manufacturer's Address:	11311 Chinden Boulevard	
	Boise, Idaho 83714-1021, USA	
declares, that the product		
Product Name:	HP LaserJet Enterprise 500 MFP M525f	
Regulatory Model:[2)]	BOISB-1107-01	
	Including	
	BOISB-0703-00 – -Fax Module	
Product Options:	All	
Toner Cartridges:	CE255A, CE255X	
conforms to the following Product Specifications:		
SAFETY:	IEC 60950-1:2005 / EN60950-1: 2006 +A11 +A1	
	IEC 60825-1:2007 / EN 60825-1:2007 (Class 1 Laser/LED Product)	
	IEC 62479:2010 / EN62479:2010	
	GB4943-2001	
EMC:	CISPR22:2005 +A1/ EN55022:2006 +A1 - Class A[1), 3)]	
	EN 61000-3-2:2006 +A1:2009 +A2:2009	
	EN 61000-3-3:2008	
	EN 55024:1998 +A1 +A2	
	FCC Title 47 CFR, Part 15 Class A / ICES-003, Issue 4	
	GB9254-2008, GB17625.1-2003	
TELECOM	ES 203 021; FCC Title 47 CFR, Part 68[4)]	

Supplementary Information:

The product herewith complies with the requirements of the R&TTE Directive 1999/5/EC Annex IV, EMC Directive 2004/108/EC, the Low Voltage Directive 2006/95/EC, and carries the CE-Marking CE accordingly.

This Device complies with Part 15 of the FCC Rules. Operation is subject to the following two Conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

1. The product was tested in a typical configuration with Hewlett-Packard Personal Computer Systems.
2. For regulatory purposes, this product is assigned a Regulatory model number. This number should not be confused with the marketing names or the product number(s).
3. The product meets the requirements of EN55022 & CNS13438 Class A in which case the following applies: "Warning – This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures".
4. Telecom approvals and standards appropriate for the target countries/regions have been applied to this product, in addition to those listed above.
5. This product uses an analog fax accessory module which Regulatory Model numbers are: BOISB-0703-00, as needed to meet technical regulatory requirements for the countries/regions this product will be sold.

Boise, Idaho USA

July 27 2011

For Regulatory Topics only, contact:

European Contact:	Your Local Hewlett-Packard Sales and Service Office or Hewlett-Packard Gmbh, Hewlett-Packard GmbH, HQ-TRE, Herrenberger Straße 140, 71034 Böblingen, Germany www.hp.eu/certificates
USA Contact:	Product Regulations Manager, Hewlett-Packard Company, PO Box 15, Mail Stop 160, Boise, Idaho 83707-0015 (Phone: 208-396-6000)

Certificate of Volatility

Figure C-1 Certificate of Volatility (1 of 2)

Hewlett-Packard Certificate of Volatility		
Model: HP LaserJet Enterprise 500 MFP M525 Series	Part Number: M525dn=CF116A, f=CF117A	Address: Hewlett Packard Company 11311 Chinden Blvd Boise, ID 83714

Volatile Memory

Does the device contain volatile memory (Memory whose contents are lost when power is removed)?
☒ Yes ☐ No If Yes please describe the type, size, function, and steps to clear the memory below

Type (SRAM, DRAM, etc):	Size:	User Modifiable:	Function:	Steps to clear memory:
DDR2 - DRAM	1 GB	☐ Yes ☒ No	Used for temporary storage during the process of jobs, and for applications that are running on the OS.	When the printer is powered off, the memory is erased.
Type (SRAM, DRAM, etc):	Size:	User Modifiable: ☐ Yes ☐ No	Function:	Steps to clear memory:
Type (SRAM, DRAM, etc):	Size:	User Modifiable: ☐ Yes ☐ No	Function:	Steps to clear memory:

Non-Volatile Memory

Does the device contain non-volatile memory (Memory whose contents are retained when power is removed)?
☒ Yes ☐ No If Yes please describe the type, size, function, and steps to clear the memory below

Type (Flash, EEPROM, etc):	Size:	User Modifiable:	Function:	Steps to clear memory:
SPI Flash	4 MB	☒ Yes ☐ No	Contains the boot code and factory product configuration data required for the device to function. User modifications are limited to downloading digitally signed HP firmware images.	There are no steps to clear this data.
Type (Flash, EEPROM, etc): ICB EEPROM	Size: 32KB	User Modifiable: ☐ Yes ☒ No	Function: Backup device for critical system counters and product configuration information.	Steps to clear memory: There are no steps to clear this data.
Type (Flash, EEPROM, etc): None	Size:	User Modifiable: ☐ Yes ☒ No	Function:	Steps to clear memory:

Mass Storage

Does the device contain mass storage memory (Hard Disk Drive, Tape Backup)?
☒ Yes ☐ No If Yes please describe the type, size, function, and steps to clear the memory below

Type (HDD, Tape, etc):	Size:	User Modifiable:	Function:	Steps to clear memory:
Self Encrypting Hard Disk, SATA 1 and SATA 2	250 GB	☒ Yes ☐ No	Stores customer data, OS, applications, digitally signed firmware images, persistent data, and temporary data used for processing and system functions. (Note: HDD is standard on CF117A model, Not Available on CF116A	There are several ways to erase this: 1. Erase and Unlock Encrypted Disk - This changes the encryption keys rendering all data unreadable. 2. Secure Storage Erase - Erases temporary files and job data by overwriting information one or three times 3. Secure Disk Erase - Industry standard ATA Secure Erase. Overwrites all data on the hard drive. 4. Secure File Erase - Erases files when jobs finish processing by overwriting them one or three times.

Figure C-2 Certificate of Volatility (2 of 2)

Type (HDD, Tape, etc):	Size:	User Modifiable:	Function:	Steps to clear memory:
Solid State Storage Device (SSD)	8 GB	☒ Yes ☐ No	Stores customer data, OS, applications, persistent data, and temporary data used for processing and system functions. User modifications are limited to downloading digitally signed HP firmware images. (Note: SSD is standard on CF116A, not available on CF117A)	Perform a Part Clean from the BIOS menu.

USB
Does the item accept USB input and if so, for what purpose (i.e Print Jobs, device firmware updates, scan upload)? ☒ Yes ☐ No If Yes please describe below
Print jobs, HP digitally signed firmware upgrades, 3rd party application loading. USB ports can be disabled.
Can any data other than scan upload be sent to the USB device)? ☒ Yes ☐ No If Yes please describe below
Diagnostic service logs can be uploaded. Print files can be printed via a USB thumb drive.

RF/RFID	
Does the item use RF or RFID for receive or transmit of any data including remote diagnostics. (e.g. Cellular phone, Bluetooth) ☐ Yes ☒ No If Yes please describe below	
Purpose:	
Frequency:	Bandwidth:
Modulation:	Effective Radiate Power (ERP):
Specifications:	

Other Transmission Capabilities	
Does the device employ any other methods of non-wired access to transmit or receive any data whatsoever (e.g. anything other than standard hard wired TCP/IP, direct USB, or parallel connections)? ☐ Yes ☒ No If Yes please describe below:	
Purpose:	
Frequency:	Bandwidth:
Modulation:	Effective Radiate Power (ERP):
Specifications:	

Other Capabilities
Does the device employ any other method of communications such as a Modem to transmit or receive any data whatsoever? ☐ Yes ☒ No If Yes please describe below:
Purpose:
Specifications:

Author Information			
Name:	Title: Security Technical Marketing Engineer	Email:	Business Unit: IPG
			Date Prepared: 04/24/12

Safety statements

Laser safety

The Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration has implemented regulations for laser products manufactured since August 1, 1976. Compliance is mandatory for products marketed in the United States. The device is certified as a “Class 1” laser product under the U.S. Department of Health and Human Services (DHHS) Radiation Performance Standard according to the Radiation Control for Health and Safety Act of 1968. Since radiation emitted inside the device is completely confined within protective housings and external covers, the laser beam cannot escape during any phase of normal user operation.

⚠ **WARNING!** Using controls, making adjustments, or performing procedures other than those specified in this user guide may result in exposure to hazardous radiation.

Canadian DOC regulations

Complies with Canadian EMC Class A requirements.

« Conforme à la classe A des normes canadiennes de compatibilité électromagnétiques. « CEM ». »

VCCI statement (Japan)

この装置は、クラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者は適切な対策を講ずるよう要求されることがあります。

VCCI-A

Power cord instructions

Make sure your power source is adequate for the product voltage rating. The voltage rating is on the product label. The product uses either 100-127 Vac or 220-240 Vac and 50/60 Hz.

Connect the power cord between the product and a grounded AC outlet.

⚠ **CAUTION:** To prevent damage to the product, use only the power cord that is provided with the product.

Power cord statement (Japan)

製品には、同梱された電源コードをお使い下さい。
同梱された電源コードは、他の製品では使用出来ません。

EMC statement (China)

此为A级产品，在生活环境中，该产品可能会造成无线电干扰。在这种情况下，可能需要用户对其干扰采取切实可行的措施。

EMC statement (Korea)

A급 기기 (업무용 방송통신기기)	이 기기는 업무용(A급)으로 전자파적합등록을 한 기기이오니 판매자 또는 사용자는 이점을 주의하시기 바라며, 가정 외의 지역에서 사용하는 것을 목적으로 합니다.

EMI statement (Taiwan)

警告使用者： 這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

Laser statement for Finland

Luokan 1 laserlaite

Klass 1 Laser Apparat

HP LaserJet Enterprise 500 MFP M525dn, M525f, laserkirjoitin on käyttäjän kannalta turvallinen luokan 1 laserlaite. Normaalissa käytössä kirjoittimen suojakotelointi estää lasersäteen pääsyn laitteen ulkopuolelle. Laitteen turvallisuusluokka on määritetty standardin EN 60825-1 (2007) mukaisesti.

VAROITUS !

Laitteen käyttäminen muulla kuin käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING !

Om apparaten används på annat sätt än i bruksanvisning specificerats, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

HUOLTO

HP LaserJet Enterprise 500 MFP M525dn, M525f - kirjoittimen sisällä ei ole käyttäjän huollettavissa olevia kohteita. Laitteen saa avata ja huoltaa ainoastaan sen huoltamiseen koulutettu henkilö. Tällaiseksi huoltotoimenpiteeksi ei katsota väriainekasetin vaihtamista, paperiradan puhdistusta tai

muita käyttäjän käsikirjassa lueteltuja, käyttäjän tehtäväksi tarkoitettuja ylläpitotoimia, jotka voidaan suorittaa ilman erikoistyökaluja.

VARO !

Mikäli kirjoittimen suojakotelo avataan, olet alttiina näkymättömällelasersäteilylle laitteen ollessa toiminnassa. Älä katso säteeseen.

VARNING !

Om laserprinterns skyddshölje öppnas då apparaten är i funktion, utsättas användaren för osynlig laserstrålning. Betrakta ej strålen.

Tiedot laitteessa käytettävän laserdiodin säteilyominaisuuksista: Aallonpituus 775-795 nm Teho 5 m W Luokan 3B laser.

GS statement (Germany)

Das Gerät ist nicht für die Benutzung im unmittelbaren Gesichtsfeld am Bildschirmarbeitsplatz vorgesehen. Um störende Reflexionen am Bildschirmarbeitsplatz zu vermeiden, darf dieses Produkt nicht im unmittelbaren Gesichtsfeld platziert warden.

Das Gerät ist kein Bildschirmarbeitsplatz gemäß BildscharbV. Bei ungünstigen Lichtverhältnissen (z. B. direkte Sonneneinstrahlung) kann es zu Reflexionen auf dem Display und damit zu Einschränkungen der Lesbarkeit der dargestellten Zeichen kommen.

Substances Table (China)

有毒有害物质表

根据中国电子信息产品污染控制管理办法的要求而出台

部件名称	有毒有害物质和元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
打印引擎	X	0	0	0	0	0
复印机组件	X	0	0	0	0	0
控制面板	0	0	0	0	0	0
塑料外壳	0	0	0	0	0	0
格式化板组件	X	0	0	0	0	0
碳粉盒	X	0	0	0	0	0

0614

0：表示在此部件所用的所有同类材料中，所含的此有毒或有害物质均低于 SJ/T11363-2006 的限制要求。
X：表示在此部件所用的所有同类材料中，至少一种所含的此有毒或有害物质高于 SJ/T11363-2006 的限制要求。

注：引用的“环保使用期限”是根据在正常温度和湿度条件下操作使用产品而确定的。

Restriction on Hazardous Substances statement (Turkey)

Türkiye Cumhuriyeti: EEE Yönetmeliğine Uygundur

Restriction on Hazardous Substances statement (Ukraine)

Обладнання відповідає вимогам Технічного регламенту щодо обмеження використання деяких небезпечних речовин в електричному та електронному обладнанні, затвердженого постановою Кабінету Міністрів України від 3 грудня 2008 № 1057

Additional statements for telecom (fax) products

EU Statement for Telecom Operation

This product is intended to be connected to the analog Public Switched Telecommunication Networks (PSTN) of European Economic Area (EEA) countries/regions.

It meets requirements of EU R&TTE Directive 1999/5/EC (Annex II) and carries appropriate CE conformity marking.

For more details see Declaration of Conformity issued by the manufacturer in another section of this manual.

However due to differences between individual national PSTNs the product may not guarantee unconditional assurance of successful operation on every PSTN termination point. Network compatibility depends on the correct setting being selected by the customer in preparation of its connection to the PSTN. Please follow the instructions provided in the user manual.

If you experience network compatibility issues, please contact your equipment supplier or Hewlett-Packard help desk in the country/region of operation.

Connecting to a PSTN termination point may be the subject of additional requirements set out by the local PSTN operator.

New Zealand Telecom Statements

The grant of a Telepermit for any item of terminal equipment indicates only that Telecom has accepted that the item complies with minimum conditions for connection to its network. It indicates no endorsement of the product by Telecom, nor does it provide any sort of warranty. Above all, it provides no assurance that any item will work correctly in all respects with another item of Telepermitted equipment of a different make or model, nor does it imply that any product is compatible with all of Telecom's network services.

This equipment may not provide for the effective hand-over of a call to another device connected to the same line.

This equipment shall not be set up to make automatic calls to the Telecom "111" Emergency Service.

This product has not been tested to ensure compatibility with the FaxAbility distinctive ring service for New Zealand.

Additional FCC statement for telecom products (US)

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the back of this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.

The REN is used to determine the quantity of devices, which may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all, areas, the sum of the RENs should not exceed five (5.0). To be certain of the

number of devices that may be connected to the line, as determined by the total RENs, contact the telephone company to determine the maximum REN for the calling area.

This equipment uses the following USOC jacks: RJ11C.

An FCC-compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack, which is Part 68 compliant. This equipment cannot be used on telephone company-provided coin service. Connection to Party Line Service is subject to state tariffs.

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. If advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications in order to maintain uninterrupted service.

If trouble is experienced with this equipment, please see the numbers in this manual for repair and (or) warranty information. If the trouble is causing harm to the telephone network, the telephone company may request you remove the equipment from the network until the problem is resolved.

The customer can do the following repairs: Replace any original equipment that came with the device. This includes the toner cartridge, the supports for trays and bins, the power cord, and the telephone cord. It is recommended that the customer install an AC surge arrestor in the AC outlet to which this device is connected. This is to avoid damage to the equipment caused by local lightning strikes and other electrical surges.

Telephone Consumer Protection Act (US)

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including fax machines, to send any message unless such message clearly contains, in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business, other entity, or individual sending the message and the telephone number of the sending machine or such business, or other entity, or individual. (The telephone number provided cannot be a 900 number or any other number for which charges exceed local or long distance transmission charges).

Industry Canada CS-03 requirements

Notice: The Industry Canada label identifies certified equipment. This certification means the equipment meets certain telecommunications network protective, operational, and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirement document(s). The Department does not guarantee the equipment will operate to the user's satisfaction. Before installing this equipment, users should ensure that it is permissible for the equipment to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations. Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company

cause to request the user to disconnect the equipment. Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution can be particularly important in rural areas.

CAUTION: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate. The Ringer Equivalence Number (REN) of this device is 0.0B.

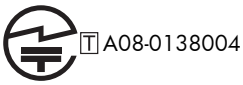
This product meets the applicable Industry Canada technical specifications. / Le présent matériel est conforme aux specifications techniques applicables d'Industrie Canada.

Notice: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Number of all the devices does not exceed five (5.0). / L'indice d'équivalence de la sonnerie (IES) sert à indiquer le nombre maximal de terminaux qui peuvent être raccordés à une interface téléphonique. La terminaison d'une interface peut consister en une combinaison quelconque de dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'excède pas cinq.

The standard connecting arrangement code (telephone jack type) for equipment with direct connections to the telephone network is CA11A.

Vietnam Telecom wired/wireless marking for ICTQC Type approved products

Japan Telecom Mark



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